



Annual Public Health Report of the Province of Assam for the year 1936

BY

DR. S. H. PAUL, M.R.C.S. (ENG.) D.P.H., (LOND.), ETC.,

DIRECTOR OF PUBLIC HEALTH, ASSAM



SHILLONG

PRINTED AT THE ASSAM GOVERNMENT PRESS

1937

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OFFICE OF THE DIRECTOR OF PUBLIC HEALTH, ASSAM

No. 12313.

FROM

DR. S. H. PAUL, M.R.C.S. (ENG.) D.P.H. (LOND.), ETC.,
DIRECTOR OF PUBLIC HEALTH, ASSAM,

TO

THE SECRETARY TO THE GOVERNMENT OF ASSAM
IN THE EDUCATION AND L.S.-G. DEPARTMENTS.

Dated Shillong, the 9th August 1937.

SIR,

I have the honour to submit herewith the Annual Public Health Report
of the Province of Assam for the year 1936.

Your obedient servant,

S. H. PAUL,

Director of Public Health, Assam.

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Annual Public Health Report of the Province of Assam for the year 1936

CHAPTER I

METEOROLOGY, ECONOMIC CONDITIONS, *I.E.*, PRICES OF FOOD-GRAINS, ETC.

The Meteorologist, Calcutta, has furnished the following note on the Chief Meteorological conditions of the province of Assam for the year 1936 :—

The cold weather period—January and February.—In January western disturbances were less active than usual and only one affected the province giving widespread rain during the period 23rd to 25th. Scattered thundershowers, however occurred occasionally, but the rainfall during the month was about 80 per cent. of the normal. A cold wave passed over the province between 12th and 15th when the night temperature was markedly below normal. Maximum temperature, humidity and cloudiness were about normal.

During February thundershowers were active intermittently—the associated rainfall being occasionally widespread. Two western disturbances also affected the province. The first one gave fairly widespread thunderstorms and rain between the 8th and 10th and the 2nd one gave local rain on the 17th and nearly general thunderstorm rain on the next day. During the month skies were more clouded than usual, rainfall higher than normal by 73 per cent. and the maximum temperature in slight defect. The minimum temperature and humidity were nearly normal.

The hot weather period—March to May.—During March no western disturbance affected the province but thunderstorms with widespread rain occurred intermittently. According to newspaper reports thunderstorms attended with hail during the 2nd week of the month caused considerable damage to life and property. During the 3rd week a severe hailstorm occurred in Digboi, a principal oil area in Assam, and damaged a number of houses. In April under the influence of one western disturbance thunderstorms were fairly active during the 1st week and widespread rain fell on the 5th and 6th. According to newspaper reports severe hailstorms occurred in Assam towards the end of the 1st week and caused considerable damage to crops and to life and property. Scattered thunderstorms also occurred during the last ten days of the month.

The chief feature of the weather during May was the setting in of the south-west monsoon in association with a depression which formed on the 26th in the Bay of Bengal near latitude 15°N. longitude 86°E. and moving north-easterly intensified into a severe cyclone near the Sandheads and filled up near Mymensingh on the early morning of the 29th. Under its influence rainfall was very heavy—Cherrapunji recording 21" and Shillong 15" on the 29th. As a result of this heavy rainfall severe floods occurred in the Brahmaputra and other rivers of Assam. Many of these overflowed their banks and are reported to have carried off hundreds of cattle and to have rendered a number of families homeless. Great damage to crops and property was experienced and in Tura, the headquarters of Garo Hills district, nearly every building is said to have been damaged owing to incessant heavy rain accompanied with fierce gales. Thunderstorms, sometime associated with hail, were also active on most days during the first half of the month. The total rainfall during the month of March was 28 per cent. in defect while in May it was 28 per cent. in excess. In April it was normal. Temperatures, humidity and cloudiness were about normal during these three months.

The monsoon period—June to September.—The south-west monsoon which established towards the end of May was generally active in the 1st week of June and weakened thereafter. It, however, revived again during the 2nd week of the month under the influence of a storm in the north Bay of Bengal on the 11th. The progress of the monsoon during the last week was controlled by two depressions—one of which formed on the 26th near the Sandheads and passed inland by the 28th and the other appeared over the Central Provinces on the 28th and travelling westwards lay over south Rajputana on the 30th. On account of widespread and heavy rain on a few days severe floods are reported. The Brahmaputra had overflowed its banks, submerged a number of houses and damaged crops considerably during the 1st week. The monsoon strengthened in association with a depression which formed at the head of the Bay of Bengal early in the month of July and became unimportant over Chota Nagpur three days later. A land depression which formed near Lucknow on the 7th and filled up five days later near Bareilly helped to maintain the activity of the monsoon. With the disappearance of this depression there was a weakening of the monsoon current but towards the end of the 2nd week, the monsoon revived and remained active till the 18th. The character of the monsoon after the date was controlled by (1) a low pressure wave which passed over the north-west angle of the Bay of Bengal into Orissa on the 18th, (2) a depression which formed off the Orissa-Ganjam coast on the 20th, crossed the coast near Puri three days later and travelling across Orissa and the east United Provinces filled up over Bihar on the 26th, (3) another depression which appeared over Lucknow on the 27th and filled up near Gorakhpur after 3 days. In association with these disturbances the monsoon current was diverted from north-east India for about a week after the 18th but was vigorous in Assam between 24th and 29th.

The south-west monsoon was active in Assam up to the 10th of August whereafter there was general weakening. A revival of the monsoon current occurred towards the end of the 2nd week when a depression had formed in the Bay of Bengal off the Orissa coast on the 16th. Under the influence of this depression the activity of the monsoon was maintained till about the 24th. There was a temporary weakening of the monsoon in Assam between the 25th and 28th but a revival took place with the passage inland near Calingapatam on the 29th of another depression which had formed at the head of the Bay of Bengal on the 24th. In September the monsoon was generally active upto the 17th and thereafter weakened. The total amount of rainfall was 10 per cent. to 14 per cent. in defect in the months of August and September whereas in June and July it was more or less normal. Temperatures, humidity and cloudiness were nearly normal during these months.

The retreating monsoon period—October to December—Under the influence of a severe cyclone in the Bay of Bengal which crossed the coast near Chandbali on the 4th morning and travelling thereafter through Orissa and Chota Nagpur recurved—north-eastwards and finally filled up over east Bengal on the 7th. Widespread and locally heavy rain fell between the 3rd and 6th; Cherrapunji recording 11" on the 7th. The rainfall during the month was normal in the plains while on the Khasi hills it was in moderate excess. There was a marked cooling during the day time due to rain and the maximum temperature was markedly below normal between the 4th and 7th. In November thundershowers occurred locally between 15th and 18th while these were scattered on the 19th and 23rd. A few falls also occurred on the 25th and 27th. Averaged over the month the rainfall was in excess by 35 per cent. In December under the influence of a western disturbance nearly general thunder-rain fell on the 21st and local rain on the 20th and 22nd. Rainfall also occurred locally on the 27th. The total amount of rainfall was in large excess during the month and in agreement with the cloud amounts were much higher than usual.

2. The report deals with the plains districts of the Province. Rice is the staple diet of the Province. The average quantity of common rice that was sold per rupee in 1936 and in the previous five years is shown year by year in the table below :

Districts	1936	1935	1934	1933	1932	1931
1	2	3	4	5	6	7
	S. c.	S. c.	S. c.	S. c.	S. c.	S. c.
Cachar	13 10	15 10	12 0	14 11	15 4	10 15
Sylhet	12 3	12 7	11 10	13 12	10 9	9 12
Goalpara	12 0	13 7	12 5	16 1	14 12	11 2
Kamrup	12 3	11 15	11 4	15 7	14 4	10 4
Darrang	14 11	13 10	13 6	14 8	12 12	11 1
Nowgong	14 4	15 5	12 10	15 7	13 12	11 9
Sibsagar	11 14	11 14	11 7	11 13	10 9	8 10
Lakhimpur	11 11	11 12	11 1	11 13	10 8	7 15

From a scrutiny of the figures given in the above table it will be seen that there was a tendency for the price of rice to rise in all districts except Darrang during the year under review. The Provincial birth and death rates fell to 30·24 and 19·63 respectively from 30·26 and 21·41 respectively in 1935.

CHAPTER II

VITAL STATISTICS

(Including population and Emigration and Immigration)

3. The report deals with the plains district of the province, the population of which according to the Census of 1931, was 7,927,953 (4,187,085 males and 3,740,868 females). As in previous years, the birth and death-rates have been calculated on the Census population of 1931 without taking into consideration the growth of population during the year. The table below shows the correct-

General Census figures.

ed population of each district under registration and indicates what the birth and death rates would have been if they were calculated on the corrected population :—

TABLE 'D' FOR THE YEAR 1936

Districts	Mid year ⁷ population	Number of births	Birth-rate per mill- based on the inter popula- tion	Birth rate per mille based on the present method	Number of deaths	Death rate per mille based on the inter-censal population.	Death rate per mille based on the present method	Difference in the birth rates $\frac{(5)-(4)}{(4)}$	Difference in the deaths rates $\frac{(8)-(7)}{(7)}$
1	2	3	4	5	6	7	8	9	10
Cachar	572,069	19,861	34·72	36·86	11,858	20·73	22·01	+2·14	+1·28
Sylhet	2,911,133	96,053	32·99	35·26	59,552	20·46	21·86	+2·27	+1·40
Goalpara ..	921,926	29,014	31·47	32·87	20,286	22·00	22·98	+1·40	+·98
Kamrup ..	10,12,698	19,055	18·82	19·51	11,319	11·18	11·59	+·69	+·41
Darrang ..	611,009	17,352	28·40	29·67	12,083	19·77	20·66	+1·27	+·89
Nowgong ..	581,322	10,316	17·75	18·34	6,506	11·19	11·56	+·59	+·37
Sibsagar ..	984,279	25,678	26·09	27·51	17,712	17·99	18·98	+1·42	+·99
Lakhimpur ..	759,814	22,375	29·45	30·88	16,285	21·43	22·48	+1·43	+1·05
Total for the Pro- vince.	8,354,250	239,704	28·69	30·24	155,601	18·63	19·63	+1·54	+1·01

Registration is only partially carried out in Hill Districts and its results are shown separately in paragraph (11) of the report.

The birth-rate of the Province for the year under report was 30·24 against 30·26 in the preceding year. A statement showing the comparison of the birth-rate of this Province with that of other provinces is appended below :—

Provinces	Birth-rate		
	1931-35	1935	1936
1	2	3	4
Assam	30·02	30·26	30·24
Bengal	29·21	32·74	33·53
Bihar	33·98	34·65	35·34
Orissa ... ..	...	...	36·63
Central Provinces	44·69	44·93	42·50
Madras	36·49	36·99	37·76
Burma	29·47	33·03	34·27
Bombay	39·62	37·00	41·40
United Provinces	36·45	36·04	38·99
Punjab	43·56	45·57	46·85
North West Frontier Province	30·54	32·22	32·64

The birth-rate of Assam was lower than that of any other Province.

4. The total number of births registered during the year under review was 239,704, yielding a birth-rate of 30·24 per 1,000 of population as compared with 239,898 and 30·26 respectively in the preceding year. The number of births registered in 1936 was lower than that recorded in 1935 by 194. The highest birth-rate (36·86) was recorded in the district of Cachar followed by Sylhet (35·26), Goalpara (32·87) and Lakhimpur (30·88). These four districts returned birth-rates above and the other four districts below the provincial average (30·24). As in previous years the lowest birth-rate was recorded in the district of Nowgong (18·34).

The highest birth-rate of 3·49 in December was followed by 3·47 in January. The lowest birth-rate (1·77) was recorded in June.

During the year under report, births exceeded deaths by 84,103 or 10·60 per mille of population. The number of males to every 100 females born was 107.

5. The total number of births registered in Urban areas in the Province in 1936 was 6,349 or 32·39 per mille of population as compared with 6,382 and 32·82 respectively in the previous year. The highest rate (62·42) was recorded, as in previous years, in the town of Barpeta in the Kamrup district followed by Polasbari (41·11) in the same district, Sunamganj (40·55) in Sylhet, North Lakhimpur (39·15) in Lakhimpur, Hailakandi (38·46) in Cachar, Nowgong (34·67) in Nowgong, Habiganj (34·18) and Karimganj (32·86) in Sylhet and Jorhat (32·40) in Sibsa-

The lowest rate (4·74) was recorded in the town of Doom Dooma in the Lakhimpur district. The proportion of females to males residing in this town is very low. The birth-rate exceeded the death-rate in all towns. The excess varied from 39·13 in Barpeta to ·53 in Doom Dooma.

6. The total number of births registered in Rural Areas in the Province in 1936 was 233,355 or 30·18 per mille of population, as compared with 233,516 or 30·20 respectively in the preceding year. The highest rate (53·35) was recorded in Kalaigaon circle in the Darrang district followed by Katigora (47·18) and Hailakandi (46·51) in Cachar, Lakhai (43·99), Fenchuganj (43·13), Baniachong (40·45), Golabganj (40·13), Maulavibazar (40·03) and Ajmiriganj (40·02) in Sylhet, Panery (39·48) in Darrang, Bijni (39·46) in Goalpara and Biswanath (39·06) in Sylhet. The circles reporting low rates were Boko (5·91) and Sorbhog (7·07) in Kamrup, Kaliabor (9·16) and Jamunamukh (9·43) in Nowgong and Digboi, Margherita (9·53) in Lakhimpur. These low rates are probably due to defective registration.

The death-rate of the Province for the year under review was 19·63 as compared with 21·41 in the previous year. A statement showing the comparison of the death-rate of this Province with those of other provinces in India and Burma is appended below :—

Provinces	Death-rate		
	1931-35	1935	1936
1	2	3	4
Assam	19·80	21·41	19·63
Bengal	22·60	22·67	24·50
Bihar	22·91	25·13	21·68
Orissa ... ..	...	...	27·84
Central Provinces	32·10	34·35	34·89
Madras	23·84	24·89	23·30
Burma	18·88	20·42	21·84
Bombay	26·97	25·56	27·73
United Provinces	23·88	24·78	22·61
Punjab	26·28	24·89	23·97
North West Frontier Province	20·40	19·42	17·92

It will be observed that the death-rate in Assam was lower than that of any other Province in India except North West Frontier Province.

7. The total number of deaths registered during the year under report was 155,601, yielding a death-rate of 19·63 per mille of population, as compared with 169,723 and 21·41 respectively in the preceding year. The quinquennial average was 19·80. Four districts *viz.*, Cachar, Sylhet, Goalpara and Darrang returned death-rates above, and the other four below the quinquennial average.

The highest death-rate was recorded in the district of Goalpara (23·60) followed by Sylhet (22·24) Cachar (21·91) and Darrang (20·62) during the year under review. The death-rate in the Nowgong district was the lowest in the Province. The total mortality in 1936 was lower by 14,122 than in the previous year. The number of deaths reported from each district in 1936 is compared below with that of 1935 :—

	1936	1935	Increase or decrease
1	2	3	4
Cachar	11,858	14,702	—2,844
Sylhet	59,552	65,492	—5,940
Goalpara	20,286	22,595	—2,309
Kamrup	11,319	15,679	—4,360
Darrang	12,083	13,285	—1,202
Nowgong	6,506	6,865	—359
Sibsagar	17,712	16,082	+1,630
Lakhimpur... ..	16,285	15,023	+1,262
Total	155,601	169,723	—14,122

The number of male deaths to every 100 female deaths was 110.

8. The total number of deaths recorded during the year in Urban Areas, in which registration is compulsory was 3,623 which is less than the figure for the previous year by 282. The death-rate in 1936 in Urban Areas was 18·48, as compared with 20·08 in the previous year. The quinquennial average was 17·66. The highest death-rate (40·04) was reported from Haflong

town. The increase was due to a large number of deaths recorded under "Fever" "Respiratory Diseases" and "other causes". Other towns reporting high rates of mortality were Tezpur (23·76), Barpeta (23·29), Hailakandi (22·48), Nazira (22·39), Golaghat (22·18), Habiganj (21·64) and Dibrugarh (21·35).

The table below shows the number of deaths recorded under each of the main heads of mortality for the years 1935 and 1936 :—

Head of mortality						1936	1935	Increase or decrease in 1936
1						2	3	4
Cholera	...	...	...	...	...	50	102	—52
Small-pox	...	...	...	...	...	64	13	+51
Fevers	...	...	...	...	...	979	1,112	—133
Dysentery and Diarrhoea	...	...	...	...	...	455	478	—23
Respiratory diseases	...	...	...	...	...	441	566	—125
Injuries	...	...	...	...	...	122	135	—13
All other causes	...	...	...	...	...	1,512	1,499	+13
Total						3,623	3,905	—282

9. The total number of deaths registered in Rural Areas in the Province during the year under report was 151,978 or 19·66 per mille of population, as compared with 165,818 or 21·44 per mille of population in the preceding year. The quinquennial average was 19·86. The number of deaths in Rural Areas under each of the main heads of mortality for the year 1935 and 1936 is contrasted in the table below :—

Head of mortality						1936	1935	Increase or decrease in 1936
1						2	3	4
Cholera	...	...	...	...	...	3,766	7,334	—3,568
Small-pox	...	...	...	...	...	899	516	+383
Fevers	...	...	...	...	...	96,261	105,607	—9,346
Dysentery and Diarrhoea	...	...	...	...	...	10,658	10,469	+189
Respiratory diseases	...	...	...	...	...	5,984	6,456	—472
Injuries	...	...	...	...	...	1,920	1,916	+4
All other causes	...	...	...	...	...	32,490	33,520	—1,030
Total						151,978	165,818	—13,840

The highest rate was recorded in the Kalaigaon circle (48·10) in the Darrang district. Other circles reporting high rates were Panery (36·07) in Darrang, Jaintiapur (32·60) in Sylhet. Bijni (30·94) in Goalpara and Lakhai (30·05) in Sylhet. The lowest rate was recorded in Boko (3·77) in the Kamrup district. The other circles reporting low rates were Sorbhog (3·86) and Hajo (7·12) in Kamrup, Jamunamukh (7·23) in Nowgong and Gauhati (7·29) in Kamrup. Fever was mainly responsible for the high rates in each of the above noted areas, other contributory causes being "All other causes" "Cholera" and "Dysentery and Diarrhoea" in case of Kalaigaon and Panery, "Cholera" and "All other causes" in case of Jaintiapur, "All other causes", "Dysentery and Diarrhoea", "Cholera" and "Small-pox" in case of Lakhai and "Dysentery and Diarrhoea", and "All other causes" in case of Bijni.

Seasonal incidence of mortality. 10. Mortality was highest (1·89) in the month of December and lowest (1·23) in March. "Fever" was mainly responsible for the highest death-rate in December.

Registration in Hill districts. 11. Births and deaths are registered in certain areas only in the Hill Districts. The birth and death-rates in these areas in 1936 are compared in the subjoined table with those of the preceding year :—

Districts	Population under registration	1936		1935	
		Birth-rate	Death-rate	Birth-rate	Death-rate
1	2	3	4	5	6
Khasi and Jaintia Hills	64,128	27·37	17·31	23·37	15·06
Naga Hills	3,974	57·79	41·19	48·27	47·17
Lushai Hills	124,404	43·75	28·34	43·51	22·91
Garro Hills	190,911	26·71	21·43	30·64	20·85
Sadiya Frontier Tract	21,118	28·93	22·73	29·60	18·85

It will be seen from the above table that the birth-rate was higher in all Hill districts except Garo Hills and Sadiya Frontier Tract. The death-rate was also higher in all Hill Districts except the Naga Hills district during the year as compared with that of the preceding year.

The total number of births and deaths in the Khasi and Jaintia Hills was 1,755 and 1,110 respectively.

Khasi and Jaintia Hills.

A few cases of cholera were reported from Hat-thymmai and Rajliting, Nongbareh, Jowai, Myngteng, Katklupunji and Mawtem villages, and Medical relief was made available in all cases. There were 17 cases of small-pox in the Shillong Municipality with 3 deaths. A total of 11,200 Vaccinations were performed and the disease was soon brought under control. One case of cholera occurred in the Shillong Municipality which ended fatally. The source of infection could not be traced. During 1936 a total of 4,559 cases of malaria were treated against 4,412 in 1935. Six hundred and fourteen boxes of quinine were sold in 1936 as compared with 569 in 1935.

The total number of births and deaths recorded in Shillong during the year was 715 or 33·57 and 315 or 14·79 respectively as compared with 705 or 33·10 and 315 or 14·79 respectively in the preceding year. The following number of cases and deaths from infectious diseases were recorded by the Shillong Municipality in 1936 :—

Disease	Cases	Deaths	Cured	Discharged otherwise
1	2	3	4	5
Tuberculosis	42	26	2	14
Enteric fever	26	9	17	...
Small-pox	17	3	13	1
Diphtheria	10	...	10	...
Leprosy	2	1	...	1
Cholera	1	1	...	...
<i>Kala azar</i>	1	...	...	1
Total	99	40	42	17

Out of the 42 cases of Tuberculosis 18 were among the indigenous population and the other cases came from outside.

The sanitation of Shillong is not as perfect as it should be.

In the Naga Hills district, vital statistical occurrences are registered only in Kohima town and Dimapur rural circle, the combined population of which is 3,974.

Naga Hil .

The Birth and death-rates noted against this district do not therefore indicate the health of the district accurately. The district was free from cholera and small-pox. Five cases of *Kala Azar* were treated during the year. No anti-malarial measures were carried out at Kohima during the year under review. Anti-malarial measures were however continued at Dimapur. Only 75 packets of quinine were sold in the district during the year.

Lushai Hills.—The total number of births and deaths was 5,443 and 3,525 respectively. The higher birth-rate and lower death-rate indicate an improvement in the general health of the district during the year under review. Only 3 cases of cholera were reported during the year. There is an artificial tank, which is the only source of water supply for Aijal. The Civil Surgeon is of opinion that this is inadequate and stressed the necessity for another tank. As usual the campaign against syphilis was carried out during the year. Seventy eight cases of Yaws were treated in 1936 against 41 in 1935. One thousand and one hundred packets of quinine were sold during the year against 1,152 packets in the preceding year.

Garo Hills.—As in the preceding year, the general health of the district was not satisfactory during the year under review. The total number of deaths was 4,091 against 3,981 in 1935. "Fever" was responsible for 1,002 deaths. There were 9 deaths from cholera against 115 in the preceding year. A total of 270 cases of Yaws were treated in 1936 against 180 in 1935. Ninety-four cases of lepers were treated in the Tura Leper Colony. One hundred and twenty two packets of quinine were sold during the year against 189 packets in the preceding year.

Sadiya Frontier Tract.—The total number of births and deaths recorded during the year under review was 611 and 480 against 617 and 398 respectively in the preceding year. The largest number of deaths (359) was recorded under "Fever". There was an outbreak of Small-pox in the district during the year. Altogether there were 59 cases with no deaths. Eighty-six packets of quinine were sold during 1936, against 63 packets in the preceding year.

Manipur State.—Births and deaths are not recorded in this State. There were 794 cases of small-pox with 173 deaths. Fourteen packets of quinine treatments were sold during the year under report.

12. The subjoined table shows the birth and death-rates reported from Tea Estates during the year 1936 as compared with those of 1935 :—
Registration in Tea Gardens.

District	Birth-rate		Death-rate	
	1936	1935	1936	1935
1	2	3	4	5
Cachar	32·58	34·27	20·46	26·42
Sylhet	30·46	28·27	15·14	16·36
Goalpara	38·85	25·10	20·54	12·09
Kamrup	29·57	26·69	21·05	20·36
Darrang	28·62	39·33	16·45	20·61
Nowgong	30·34	25·60	18·90	14·46
Sibsagar	39·69	38·90	27·37	23·12
Lakhimpur	43·34	45·34	31·52	29·64
Total	36·05	37·33	23·38	23·31

The birth and death-rates on Tea Estates were 36·05 and 23·38 as compared with 37·33 and 23·31 respectively in the previous year. Birth and death-rates on Tea Estates are in excess of the Provincial rates which are 30·24 and 19·63 respectively. The total number of births on Tea Estates in 1936 was 35,616 and the total number of deaths 23,098 as compared with 36,552 and 22,823 respectively in the preceding year. The largest number of deaths (8,294) under “All other causes” was followed by 4,409 under “Respiratory diseases”, 4,386 under “Fever” and 4,322 under “Dysentery and Diarrhoea”.

A total of 72 deaths from *kalaazar* was returned from Tea Estates in 1936 against 73 in 1935. As usual, Tea Gardens obtained their supplies of Urea-stibamine at concession rates. A total of 194 deaths from Cholera and 8 deaths from Small-pox were reported from Tea Estates during the year under report.

13. The total number of births and deaths registered within railway limits during the year 1936 was 207 and 181 as compared with 163 and 154 respectively in the previous year. As in previous years the largest number of births and deaths was returned from Lakhimpur district. The highest mortality (79) was recorded under “All other causes” and was followed by (58) under “Respiratory Diseases” during 1936.

Mortality according to sex.—A total of 81,498 males, and 74,103 females died in 1936 against 88,054 males and 81,669 females in the preceding year. The death-rates of 19·46 for males and 19·81 for females were less by 1·57 for males and 2·02 for females than in the previous year and ·17 and ·18 respectively than the previous quinquennium. The female death-rate exceeded the male death-rate in 4 districts. The highest death-rate for males (23·23) was returned from the Goalpara district and that for females (24·51) from the Lakhimpur district. The lowest death-rates for both sexes, *viz.*, 11·68 for males and 11·43 for females were returned from the Nowgong district as in previous years.

Mortality according to class.—Classified according to classes, 1,648 Christians, 89,338 Hindus, 54,670 Muhammadans, 128 Budhists, and 9,817 other classes died during the year 1936. The death-rates per mille are shown by classes in the subjoined table :—

Classes	Ratio of deaths per mille, 1935	Ratio of deaths per mille, 1936	Difference
1	2	3	4
Christians	21·73	20·95	—·78
Hindus	19·34	18·50	—·84
Muhammadans	22·58	19·93	—2·65
Budhists	10·50	11·69	+1·19
Other Classes	47·05	36·73	—10·32

The highest death-rate among Hindus (21·72) was registered in Lakhimpur district and that for Muhammadans (23·28) in the Cachar district. The lowest rate for Hindus (12·02) was registered in Kamrup district and that for Muhammadans (7·82) was returned from the Nowgong district.

Mortality according to age.—The rate of mortality by sexes in different age groups and the excess or defect of female death-rates are shown in the table below :—

Age periods	1936		Excess or defect of female death-rate
	Male	Female	
1	2	3	4
Under one year ...	158·51	142·59	—15·92
1—5 ...	59·23	78·11	+18·88
5—10 ...	14·52	18·19	+3·67
10—15 ...	5·12	5·21	+·9
15—20 ...	4·04	5·91	+1·87
20—30 ...	18·41	25·23	+6·82
30—40 ...	14·96	16·41	+1·45
40—50 ...	12·45	9·53	—2·92
50—60 ...	12·55	8·47	—4·08
60 and upwards...	73·41	54·97	—18·44
Total ...	19·46	19·81	+·35

It will be seen from the above table that the highest mortality was recorded amongst infants under one year of age and lowest amongst male between 15-20 years of age and amongst females between 10-15 years of age.

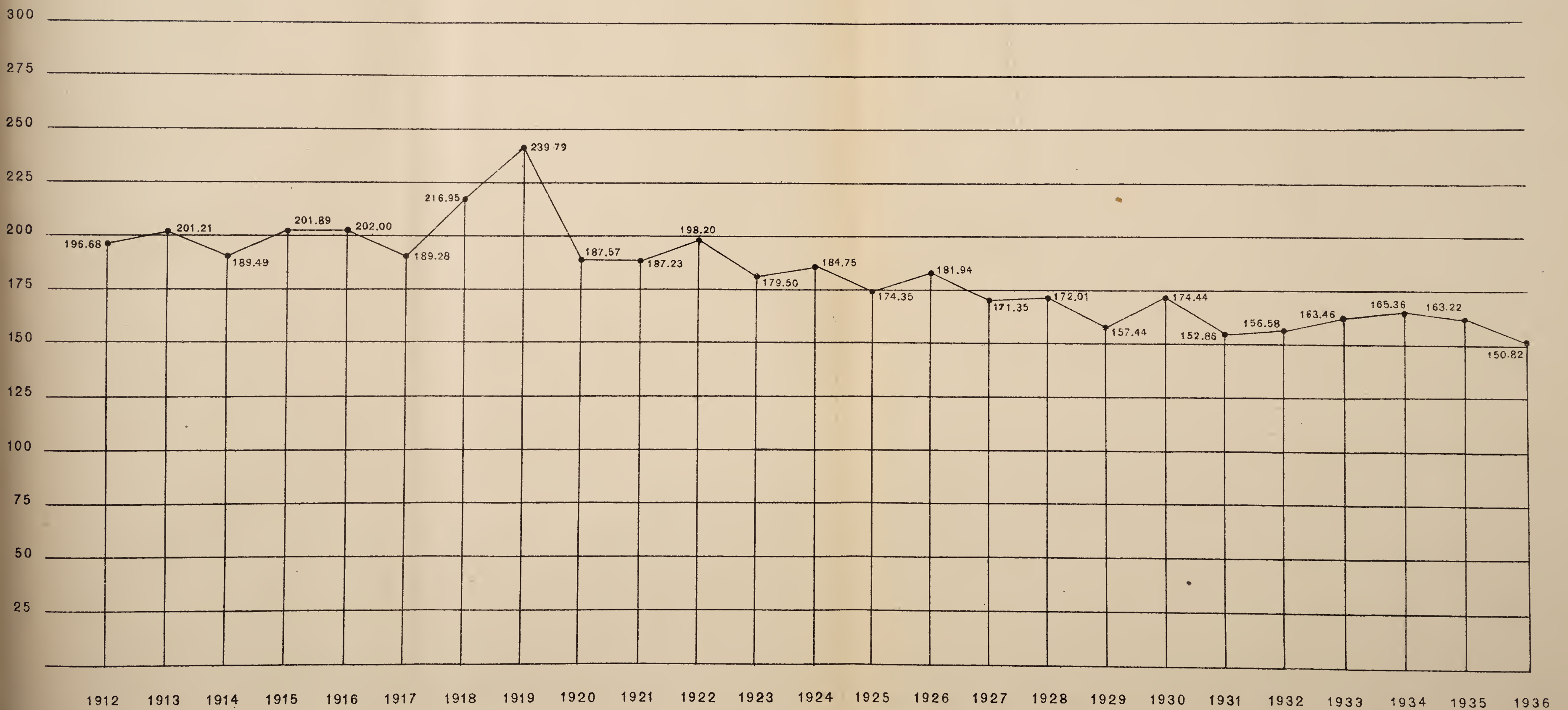
The following table shows the deaths and death-rates amongst infants calculated on the birth for the last ten years :—

Year	Births			Death of infants			Death-rate of infants		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10
1926 ..	108,967	102,266	211,233	21,029	17,403	38,432	192·98	170·17	181·94
1927 ..	107,461	99,828	207,289	19,253	16,266	35,509	179·16	162·94	171·35
1928 ..	110,774	103,283	214,057	20,233	16,587	36,820	182·65	160·59	172·01
1929 ..	116,177	108,417	224,594	19,374	15,987	35,361	166·76	147·46	157·44
1930 ..	110,400	104,345	214,835	20,166	17,310	37,476	182·66	165·75	174·44
1931 ..	115,139	107,867	223,006	18,465	15,624	34,089	160·37	144·84	152·86
1932 ..	122,845	115,474	233,319	20,398	16,918	37,316	166·05	146·51	156·58
1933 ..	126,882	119,236	246,118	21,903	18,328	40,231	172·62	153·71	163·46
1934 ..	125,740	117,016	242,756	21,893	18,250	40,143	174·11	155·96	165·36
1935 ..	123,668	116,230	239,898	21,015	18,140	39,155	169·93	156·07	163·22
1936 ..	123,839	115,865	239,704	19,630	16,522	36,152	158·51	142·59	150·82

The infant mortality rate of the Province in 1936 was lower than that of any of the previous years. Of the 239,704 infants born during the year 36,152 died. The largest number (18,494) died within one month of birth. A total of 11,189 died in the age period over one month but not exceeding six months and 6,469 died in the period over six months but not exceeding one year. In the following table the infant mortality rate for Assam is compared with that of other provinces in India :—

Provinces	Rates
Assam ...	150·82
Bengal ...	170·9
Bihar ...	117·98
Orissa ...	198·87
Central Provinces ...	234·98
Madras ...	164·04
Burma ...	195·34
United Provinces ...	148·53
Punjab ...	158·44
North West Frontier Province ...	121·72
Bombay ...	166·08

CHART
Infantile Mortality (per 1,000 of Births) in the Province of Assam
from 1912 to 1936



The infant mortality rate in Assam for 1936 compares favourably with that of Bengal, Orissa, Central Provinces, Madras, Burma, Punjab and Bombay. The heavy mortality amongst infants is due in very large measures to immaturity and ignorance of the mother, improper feeding and to exposure of infants to insanitary surroundings. The high infant mortality rate indicates that, to ensure the child population, vigorous educational measures are necessary in regard to the care of infants.

The number of still births recorded during the year under review was 8,910 as compared with 8,748 in 1935. The percentage of still births to live births was 3·72 in 1936 against 3·65 in 1935.

A Chart showing the infant mortality in Assam from 1912 to 1936 is attached.

Registration in compulsory areas. 14. The statement below shows the defects in registration of vital occurrences during the year 1936 in compulsory Urban Areas as ascertained by the Vaccination Inspecting Staff:—

Municipalities	Unregistered vital occurrences during 1936		Recorded vital occurrences		Percentage of omissions	
	Births	Deaths	Births	Deaths	Births	Deaths
1	2	3	4	5	6	7
Silchar	3	...	347	202	·80	...
Hailakandi	3	...	77	45	3·89	...
Haflong	8	...	32	45	25·00	...
Sylhet	12	7	657	374	1·82	1·87
Karimganj	...	...	187	111	...	...
Maulvibazar	10	2	117	61	6·22	3·27
Sreemangal	...	...	43	10	...	...
Habiganj	5	1	259	164	1·93	·60
Sunamganj	7	4	216	103	3·24	3·88
Dhubri	3	1	283	161	1·06	·62
Goalpara	12	...	203	82	5·91	...
Gauripur	...	...	161	89	...	...
Gauhati	25	7	695	388	3·59	1·80
Barpeta	35	7	860	321	4·07	2·18
Polashbari	14	3	142	62	9·86	4·19
Tezpur	10	11	286	244	3·49	4·51
Mangaldai	1	1	53	31	1·88	3·23
Nowgong	21	5	361	199	5·81	2·51
Jorhat	25	4	270	147	9·26	2·72
Sibsagar	7	1	211	86	3·31	1·16
Golaghat	...	...	131	104	...	...
Nazira	...	...	103	78	...	...
Dibrugarh	9	2	419	400	2·14	·50
North Lakhimpur	...	...	83	34	...	...
Doom Dooma	...	...	9	8	...	...
Tinsukia	2	...	144	74	1·38	...
Shillong	15	5	715	315	2·08	1·58

A total of 231 persons were prosecuted during the year under report for failing to report vital occurrences in the 27 Municipal towns where registration is compulsory. Of this number 168 persons were convicted with fines which amounted to Rs.151-4-0. No omissions were detected in the towns of Karimganj, Gauripur, Golaghat, Nazira, North Lakhimpur and Doom Dooma.

15. The Vaccination Inspecting Staff verified the records of 40,513 births and 24,243 deaths in rural areas in 1936, as compared with 42,759 and 26,209 respectively, in 1935. The percentage of omissions detected was 5·57 in respect of births and 2·54 in respect of deaths as compared with 5·48 and 2·90 respectively in the previous year. As in previous years, the district of Sylhet stood first with 20,454 entries tested, followed by Darrang with 8,992 and Cachar with 7,844. Kamrup stood last with 4,095 entries tested in 1936.

Only 40,513 births and 24,243 deaths were verified during the year out of a total of 239,704 births and 155,601 deaths yielding the percentages of 16·90 and 15·58 respectively. More extensive verification of vital statistics is necessary.

16. During the year under review the principal local agents of all Tea Estates in Assam Railway Administrations, the Assam Oil Company, Limited and the Assam Railways and Trading Company, Limited have been made responsible for registering births and deaths occurring upon lands in their occupation. As usual, Weekly Epidemic Reports and Monthly Vital Statistical returns were published regularly in the Provincial Gazette and in certain local papers for the information of the general public.

General accuracy of Vital Statistics and improvement made during the year.

Emigration and Immigration.

17. A statement showing month by month the number of coolies that left for Assam during the year 1936 is appended below :—

Month								Total number of immigrants left for Assam during the year 1936
1								2
January ...	...	...	...	...	...	...	...	4,912
February ...	...	...	...	...	...	...	...	7,340
March ...	...	...	...	...	...	...	...	6,349
April ...	...	...	...	...	...	...	...	4,350
May ...	...	...	...	...	...	...	...	2,151
June ...	...	...	...	...	...	...	...	917
July ...	...	...	...	...	...	...	...	383
August ...	...	...	...	...	...	...	...	100
September ...	...	...	...	...	...	...	...	55
October ...	...	...	...	...	...	...	...	122
November ...	...	...	...	...	...	...	...	181
December ...	...	...	...	...	...	...	...	633
Total ...								27,493

A total of 174 emigrants were taken ill enroute of whom 9 died.

The following statement shows the number of sick coolies treated month by month in the Emigration Hospitals at Gauhati and Tezpur during the year 1936 :—

Name of diseases	January	February	March	April	May	June	July	August	September	October	November	December	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
GAUHATI HOSPITAL													
Malaria ..	3	5	4	1	2	2	1	..	..	1	1	1	21
Broncho Pneumonia ..	1	..	..	..	..	..	..	..	..	..	..	1	2
Conjunctivitis ..	6	5	12	7	6	4	2	1	..	..	..	9	52
Bronchitis	3	..	..	..	..	..	..	..	..	..	1	4
Infantile Liver	1	..	..	..	..	..	..	..	..	..	..	1
Abscess	1	..	..	..	..	..	..	..	..	..	1	2
Diarrhoea	1	2	1	..	..	..	1	..	1	..	..	6
Ulcer	1	..	..	..	..	..	..	..	..	..	1
Skin disease (lichen)	4	..	..	..	..	..	..	..	..	..	4
Ricket	1	..	..	..	..	..	..	..	..	..	1
Asthma	1	..	..	..	..	..	..	..	..	..	1
Measles	3	..	..	..	..	..	..	..	..	3
Small-pox	3	1	..	..	..	..	..	..	..	4
Rheumatism	1	..	..	..	..	..	..	..	1
Dysentery	1	..	..	..	..	..	..	..	1
Elephantiasis	1	..	..	..	..	..	..	1
Ulcer cornea	1	..	..	..	1
Colic Intestinal	1	..	..	1
Total ..	10	16	25	15	11	7	3	2	1	3	1	13	107
TEZPUR HOSPITAL													
Ankylostomiasis	1	..	..	..	..	..	..	..	..	..	..	1
Chicken-pox	1	1	..	..	..	..	..	..	..	..	..	2
Diarrhoea	1	..	..	..	..	1	..	..	..	2
Dysentery	1	..	..	1	..	..	..	2
Small-pox	1	..	..	1
Total	2	1	1	..	1	..	..	2	1	..	..	8

[The Emigration hospital at Tezpur was closed on the 1st June 1937.]

18. During the year 1936 no new railway construction was undertaken in Assam either by the Eastern Bengal or Assam-Bengal Railways. There were 5 coolie camps, *viz.*, Dittockcherra Ballast and Boulder-siding camp and camp at bridge No. 19 in Cachar district, Langcholist camp in Nowgong district, Behubar quarry in Sibsagar District and camp at Tinsukia in the Lakhimpur district. The population of these camps ranged from 255 to 1,150. *Kutsha* huts were provided and their surroundings were kept clean. Sweepers were employed for conservancy. There was no epidemic of cholera or small-pox but malaria was prevalent in the Dittockcherra Ballast and Boulder-siding camp. One Sub-Assistant Surgeon and one Compounder were kept for treatment of diseases.

CHAPTER III

THE STATE OF PUBLIC HEALTH AND THE HISTORY OF CHIEF DISEASES

19. The information recorded in the preceding paragraphs will indicate that the state of health in the province during the year under review was satisfactory. Deaths under all heads of mortality with the exception of some increase under "small-pox" were smaller during the year 1936.

A total of 155,601 deaths occurred during the year, *viz.*, 3,816 from cholera, 963 from small-pox, 97,240 from fevers, 11,113 from dysentery and diarrhoea, 6,425 from respiratory diseases, 2,042 from injuries and 34,002 from all other causes. The following table shows the death rates per mille from the chief causes of mortality during 1936, as compared with the decennium ending 1935:—

Diseases	1926—35			1936		
	Urban	Rural	Combined	Urban	Rural	Combined
1	2	3	4	5	6	7
Cholera ...	·53	·92	·91	·25	·49	·48
Small-pox ...	·11	·30	·30	·33	·12	·12
Plague ...	...	...	...	...	...	...
Fever ...	4·88	12·15	11·97	4·99	12·45	12·27
Dysentery and Diarrhoea	2·21	1·16	1·19	2·32	1·38	1·40
Respiratory diseases ...	2·27	·70	·74	2·25	·77	·81
Injuries ...	·53	·24	·25	·62	·25	·26
All other causes ...	6·66	4·07	4·14	7·71	4·20	4·29
Total ...	17·18	19·55	19·49	18·48	19·66	19·63

The death-rate for the year 1936 was higher than the decennial rate by ·14.

20. The total number of deaths from cholera reported during the year was 3,816 as compared with 7,436 in 1935. The death-rate per 1,000 population was ·48 against ·94 in the preceding year. The decennial average was ·91 as shown in the sub-joined table.

Districts	Death-rate per mille	
	1926—35	1936
Cachar ...	·64	·86
Sylhet ...	1·23	·75
Goalpara ...	1·04	·08
Kamrup ...	1·47	·31
Darrang ...	·70	·58
Nowgong ...	·50	·11
Sibsagar ...	·34	·40
Lakhimpur ...	·16	·21
Total ...	·91	·48

The largest number of deaths (617) occurred in December followed by November (470) and May (441). The lowest mortality (79) was recorded in March. The highest death-rate (·86) was reported from the Cachar district followed by Sylhet (·75). The lowest death-rate (·08)

was returned from Goalpara. Deaths from cholera were reported from 103 out of 148 registration circles and from 1432 villages out of 28,333 in the Province. During the year under report 50 deaths from cholera occurred in towns and 3,766 in rural areas. Deaths from cholera were reported from 13 towns. Sunamganj (9) headed the list followed by Sylhet and Silchar (8) and Gauhati and Habiganj (5) each. The rural circle of Kalaigaon in Darrang district reported the highest death-rate (3·68). The other circles reporting high death-rates were Jaintiapur (3·08) in Sylhet, Udarbund (2·72) in Cachar and North Lakhimpur (2·64) in Lakhimpur.

The amount of cholera vaccine issued in the province since 1926 is noted below:—

1926	...	...	...	...	...	154,760	c. c. s.
1927	...	...	...	...	...	419,880	
1928	...	...	...	...	...	237,773	
1929	...	...	...	...	...	356,047	
1930	...	...	...	...	...	220,532	
1931	...	...	...	...	...	170,820	
1932	...	...	...	...	...	169,317½	
1933	...	...	...	...	...	451,884	
1934	...	...	...	...	...	171,117	
1935	...	...	...	...	...	475,955½	
1936	...	...	...	...	...	368,898½	

A total of 167,583 persons were inoculated with cholera vaccines in 1936 excluding those inoculated in Tea Estates. A total of 689,320 doses of bacteriophage were issued during the year under report. Experiment with Bacteriophage which was being tried out in the Nowgong district and Habiganj subdivision of the Sylhet district was abandoned with effect from the 1st April 1937. As in past years, five mobile Epidemic Units, each consisting of 3 Sub-Assistant Surgeons and 6 Disinfectant Carriers were employed viz., two in Sylhet and one in each of the districts of Goalpara, Kamrup and Nowgong. The units in Habiganj and Nowgong were fully employed in the bacteriophage experiment. Their services were therefore not available for other duties. The establishment of Epidemic Units have been fully justified and the provision of more such units is very necessary and much overdue.

Chart No. II showing the provincial mortality from cholera from 1912 to 1936 is attached.

21. A total of 194 deaths from cholera were reported from Tea Estates during the year, as compared with 137 deaths in the preceding year. The corresponding ratios per mille being ·19 and ·14 respectively. The highest rate (·38) was returned from the Tea Estates in the Cachar district. Tea Estates in the Kamrup district were free from cholera during the year under review.

22. The total number of deaths from small-pox during the year under report was 963 as compared with 529 in 1935 showing an increase of 434 deaths. The death-rate was ·12 per mille as compared with ·07 in 1935 and ·30 the decennial average as shown below:—

Districts	Death-rate per mille	
	1926—35	1936
Cachar	·21	·03
Sylhet	·34	·17
Goalpara	·45	·003
Kamrup	·32	·40
Darrang	·10	·07
Nowgong	·01	·07
Sibsagar	·48	·02
Lakhimpur	·15	·004
Total	·30	·12

A total of 324 villages out of 28,333 were affected with small-pox. Mortality from small-pox was reported from 60 out of 148 registration circles. The highest number of deaths (126) occurred in May and the lowest (41) in October. Two districts yielded death-rates from small-pox above the provincial average (·12) per mille. Kamrup with its death-rate of ·40 heads the list followed by Sylhet with ·17. A total of 64 deaths were reported from towns and 899 from rural circles. One hundred and seven children below one year of age and 111 between one and 10 years of age died in 1936 from small-pox against 14 and 26 respectively in the preceding year. The remaining deaths (745) occurred—among adults.

Chart No. III showing the provincial mortality from small-pox from 1912 to 1936 is attached.

23. Deaths from small-pox were reported from 5 Towns. As in previous year Gauhati in Kamrup district stood first (2·43) followed by Polashbari in Kamrup (1·45). Among rural circles Ajmiriganj in the Sylhet district reported the highest rate (2·43) followed by Sulla in Sylhet and Kamalpur in Kamrup (1·88) each, Lakhai (·86) in Sylhet, Hajo (·77) in Kamrup and Baniachong (·58) in Sylhet.

High rate of mortality from small-pox in individual towns and rural areas.

CHART
Mortality from Cholera in Assam
from 1912 to 1936

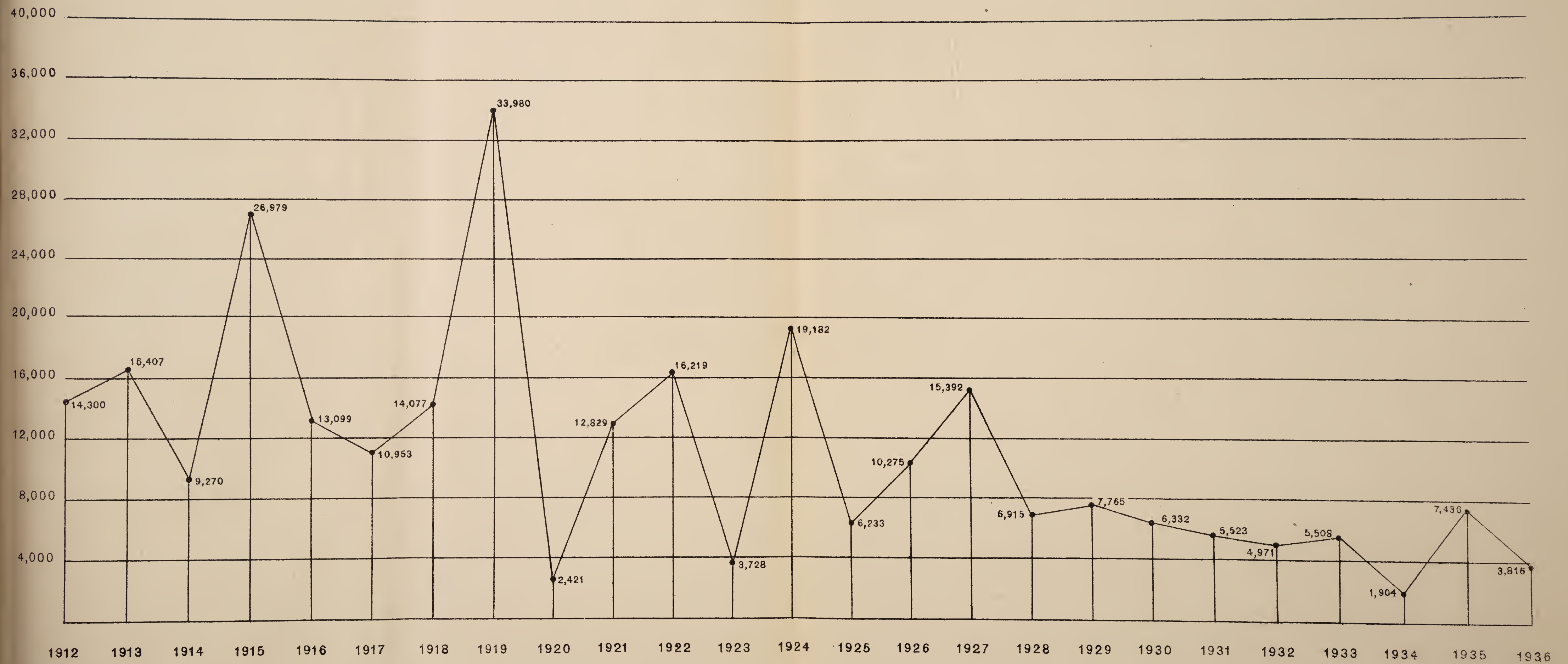


CHART
Mortality from Small-pox in Assam
from 1912 to 1936

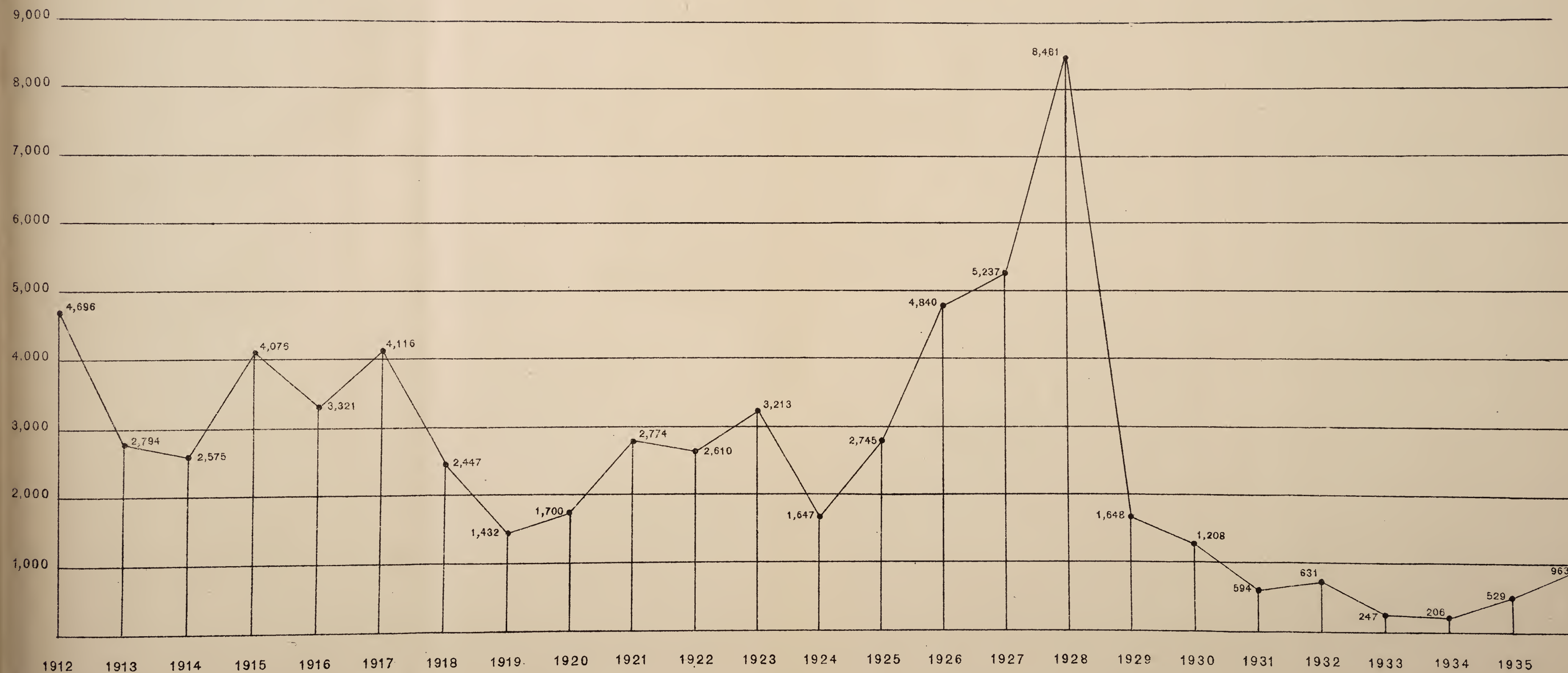
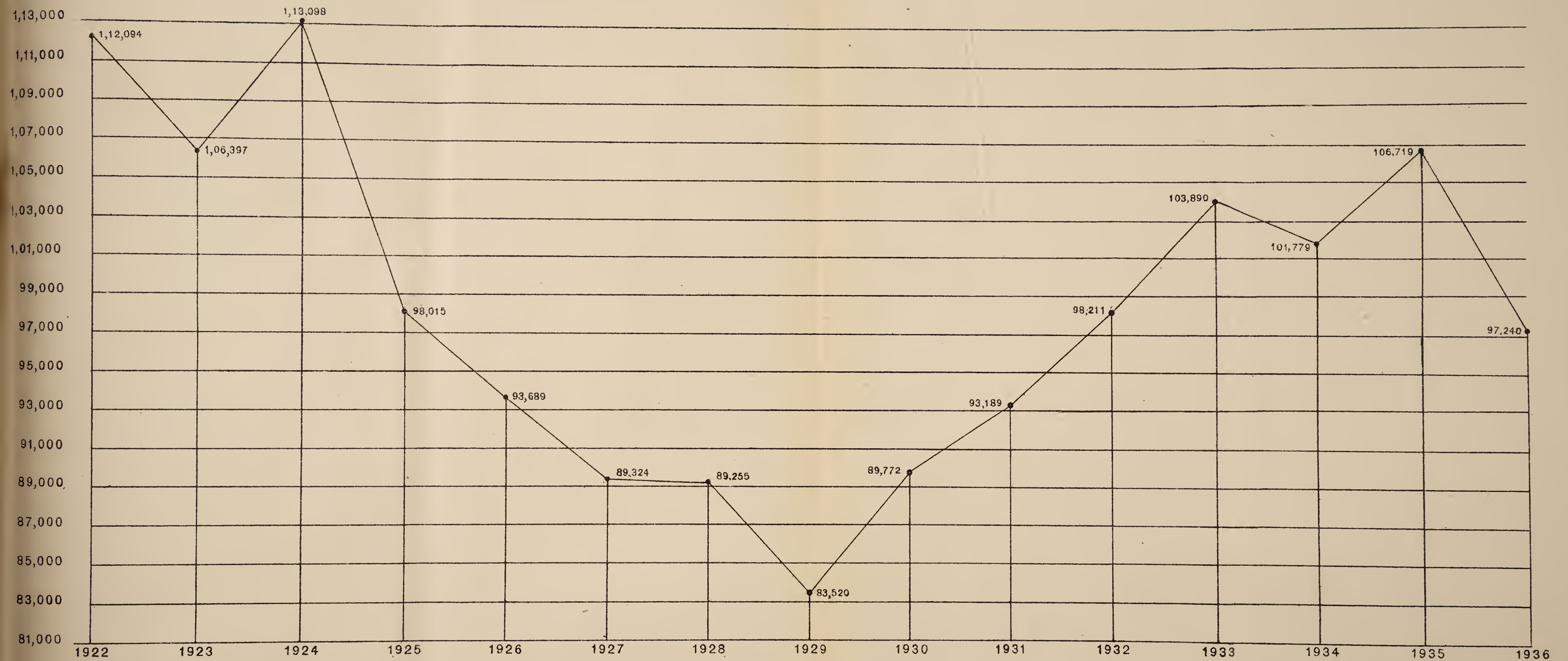


CHART
Total number of deaths due to fevers



There is no special hospital in Assam for the isolation and treatment of small-pox. Particulars of cases treated in the Infectious Diseases Hospitals, where such exist, are given in the appended table :

Municipal Towns	Number of small-pox patients treated	Vaccinated as evidenced by presence of one or more vaccination cicatrices	Stated to have been successfully vaccinated but no vaccination cicatrices present	Stated to be vaccinated (or vaccinated unsuccessfully and no cicatrices present	Previously unvaccinated but vaccinated during the incubation of small-pox	Stated to have been successfully vaccinated
1	2	3	4	5	6	7
Dhubri ...	...	...	...	...	...	...
Shillong ...	12	1	7	4	...	...
Gauhati ...	45	29	10	6	...	...
Tezpur ...	...	...	...	...	...	...

Plague.

24. No case of Plague was reported from any district in 1936.

25. The total number of deaths from fevers during the year under review was 97,240 as compared with 106,719 in 1935. This shows a decrease of 9,479.
 Fevers. The death-rate per mille was 12·27 as compared with 13·46 in the preceding year and 11·97 during the last decinnium as shown in the table below :—

Districts	Death-rate per mille	
	1926-35	1936
Cachar ...	10·83	10·77
Sylhet ...	12·0003	12·39
Goalpara ...	20·59	21·78
Kamrup ...	10·02	8·60
Darrang ...	12·87	13·60
Nowgong ...	10·14	9·12
Sibsagar ...	9·20	10·19
Lakhimpur ...	9·13	10·27
Total ...	11·97	12·27

“ Fevers ” was responsible for 62·49 per cent. of the total provincial mortality as compared with 62·88 per cent. in the previous year. These figures include deaths from Malaria, *kala azar* and also from various diseases, which have fever as their predominant symptom. The largest number of deaths (9,393) was recorded in June and the smallest (6,862) in March. As in previous years, the highest mortality rate from “ Fever ” was recorded in the district of Goalpara (21·78). The lowest rate (8·49) was recorded in Kamrup. As in previous years Quinine and Cinchona were distributed free to indigent malaria patients throughout the Province.

Chart No. IV showing the provincial mortality from “ Fevers ” from 1922 to 1936 is attached :—

26. Dysentery and Diarrhœa.

Districts	Death-rate per mille	
	1926-35	1936
Cachar ...	2·07	1·91
Sylhet ...	1·13	1·11
Goalpara ...	·25	·26
Kamrup ...	·56	·36
Darrang ...	1·55	2·09
Nowgong ...	·54	·78
Sibsagar ...	1·94	2·97
Lakhimpur ...	1·97	2·81
Total ...	1·19	1·40

The total number of deaths registered from Dysentery and Diarrhœa during the year was 11,113 as compared with 10,947 in 1935. The corresponding death-rates for the two years were 1·40 and 1·38 respectively. The decennial average was 1·19. The highest number of deaths (1,339) was recorded in June and the lowest (476) in March. The highest mortality rate was returned from Sibsaagar district (2·97) followed by Lakhimpur (2·81) and Darrang (2·09). The lowest rate was recorded in the Goalpara district (·26). The number of deaths registered under “ Dysentery and Diarrhœa ” was larger by 166 than that of the previous year. Bacteriophage has been largely used in the Nowgong district since December 1929. The effect of bacteriophage on Dysentery and Diarrhœa in this district does not appear to be very striking as the figures of mortality given below indicate :—

1929	...	203
1930	...	277
1931	...	316
1932	...	248
1933	...	322
1934	...	310
1935	...	364
1936	...	440

27. A total of 6,425 deaths occurred from these diseases during the year under report as compared with 7,022 in the preceding year, yielding, death-rates of .81 and .89 respectively. The quinquennial average was .76. The highest mortality from Respiratory Diseases was registered in February (592) and the lowest in June (501). As in previous years, Lakhimpur district heads the list with a death-rate (2.53) followed by Cachar (1.57). The lowest rate was recorded in the Goalpara district (.16).

28. The mortality from this disease is included under "Fevers". The total number of deaths from sporadic cases of Influenza during 1936 was 62 against 42 in the preceding year.

29. During the year, 2,042 deaths from "Injuries" and 34,002 from "All other Causes" were returned as compared with 2,051 and 35,019 respectively in the preceding year. The corresponding death-rates were .26 and 4.29 in 1936 and .26 and 4.42 respectively in 1935.

During the year under review a total of 77 deaths were reported from 15 Towns viz., Silchar (2), Sylhet (2), Karimganj (3), Habiganj (2), Dibrugarh (11), Tinsukia (2), Nowgong (5), Tezpur (4), Gauhati (5), Barpeta (13), Dhubri (3), Jorhat (2), Sibsagar (13), Nazira (1) and Shillong (9). Preventive T. A. B. inoculations were administered to contacts and other measures taken to check the spread of the disease.

Cerebrospinal fever. During the year under report 99 deaths from this disease was reported from 3 districts viz., Sibsagar (3), Naga Hills (1) and Manipur State (95).

30. An outbreak of epidemic dropsy was reported from the area under Kulaura Police Station in the Sylhet district. An Epidemic Unit Sub-Assistant Surgeon was deputed to deal with the outbreak. He detected a large number of patients and directed them to undergo treatment in the Kulaura dispensary.

31. During the year under report 3,496 cases of Yaws were treated against 4,201 in 1935. The decrease of 705 in the number of cases treated is mainly due to the fall in the Goalpara, Kamrup and Nowgong districts. The largest decrease (635) was in the Goalpara district. This was due to the fact that Goalpara Local Board did not provide adequate funds for drugs for the treatment of yaws cases in the Local Board dispensary. Later in the year, drugs were supplied from Government grant. Serological test of blood sera of Yaws cases are being done by the Assistant Surgeon, Public Health Department. In Kamrup district 339 cases were treated. One new centre was opened and 4 Sub-Assistant Surgeons were trained in the diagnosis and treatment of yaws in this district. In the Nowgong district a total of 488 cases were treated and in the Garo Hills a total of 270 cases were treated. Garo Hills, Darrang and Cachar districts treated larger number of patients than the previous year.

32. During the year under review a total of 7,896 cases of minor eye complaints were treated by the Public Health Department dispensaries against 6,547 in 1935. The treatment of minor eye complaints in the Public Health Department dispensaries is becoming more and more popular.

33. Reports of the outbreak of Jhin Jhinia were received from the districts of Sylhet, Kamrup, Nowgong and Darrang in the month of May. Leaflets in Bengali and Assamese describing the symptoms and treatment and reassuring the public of the harmless nature of the disease were issued by the Department and circulated to the general public. No death was reported.

34. The number of Sub-Assistant Surgeons of the Public Health Department during the year remained the same as in the previous year. The following table shows the number of deaths from *kala azar* from 1926-1936 :—

Districts	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
1	2	3	4	5	6	7	8	9	10	11	12
Cachar	9	12	2	3	2	4	4	2	6	7	2
Sylhet	1,320	798	482	429	274	246	296	146	227	260	173
Goalpara	297	226	166	135	112	121	122	92	61	100	84
Kamrup	714	475	241	180	102	160	152	129	151	176	61
Darrang	474	318	258	241	185	222	155	167	136	91	155
Nowgong	839	528	260	178	132	129	132	110	78	52	121
Sibsagar	170	143	86	87	58	71	78	64	84	101	99
Lakhimpur	1	5	5	1	2	..	2	4	..	..	..
Khasi and Jaintia Hills	4	3	4	..	..	..	..	..	4	..	10
Naga Hills .. .. .	..	..	..	1	1	..	1	1	..	..	..
Lushai Hills	1	..	1	..	..	..	1	..	..	..	..
Garo Hills	346	350	154	149	84	64	43	34	23	58	47
Sadiya Frontier Tract	1	1	1	1	..	..	1	..	..	..	1
Manipur State .. .. .	..	..	..	..	1	..	..	..	..	..	..
Total	4,176	2,859	1,660	1,405	953	1,017	987	749	770	845	753

The following table shows the number of *kala-azar* cases treated from 1926-1936 :—

Districts	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
1	2	3	4	5	6	7	8	9	10	11	12
Cachar	333	359	394	470	376	370	391	472	529	478	574
Sylhet	16,335	10,527	8,988	9,162	6,726	5,512	4,719	4,210	4,612	3,869	3,645
Goalpara	5,671	3,495	2,316	2,389	1,439	992	1,089	1,159	1,107	1,245	1,276
Kamrup	7,301	6,445	3,577	2,598	1,814	1,690	2,061	2,223	2,197	1,465	1,309
Darrang	4,414	4,053	2,228	1,399	1,106	942	665	757	876	738	636
Nowgong	9,586	5,008	2,614	2,433	1,440	1,057	1,075	1,663	1,726	1,651	1,471
Sibsagar	2,658	1,521	1,555	2,387	1,495	1,095	1,269	1,251	1,372	938	864
Lakhimpur	20	19	28	23	23	3	12	13	18	12	6
Khasi and Jaintia Hills	198	120	6	..	..	..	..	1	5	..	..
Naga Hills	2	1	5	9	21	5	16	12	14	7	5
Lushai Hills .. .. .	..	..	1	..	..	4	2	1	..	..	..
Garo Hills	2,812	1,828	1,690	2,905	1,905	882	605	850	927	690	793
Sadiya Frontier Tract	4	3	8	3	2	2	1	2	1	..	..
Manipur State	31	36	166	35	83	38	53	36	14	7	8
Total	49,385	33,415	23,576	23,804	16,430	12,592	11,958	12,650	13,398	11,100	10,587

The number of deaths from *kala-azar* was less in 1936 by 92 than that of the preceding year. The number of patients treated fell from 11,100 in 1935 to 10,587 in 1936. The conditions in individual districts appear to have remained practically the same as in previous year. The method of diagnosis and treatment of *kala-azar* was the same as on previous year. The treatment throughout the province is by means of intravenous injection with urea-stibamine. In the cachar district 391 villages were surveyed for *kala-azar* and 401 cases were suspected to be suffering from *kala-azar* of which 135 cases were found to be positive. All these cases were brought under treatment. No area was found to be heavily infected justifying—opening of a Public Health Department Dispensary. The dispensary at Bazarghat in the Sylhet district was closed during the year under review. Proposal for shifting the same to Govindanagar is being examined. In the Goalpara district survey work is being carried on regularly. In the Kamrup district thorough survey of Mussalpur, Goreswar, Bandapara, Roha, Sorbhog, Kundanbari. Dwarkuchi areas and area around five miles of Gauhati town were undertaken and completed. The result of survey justified the opening of a new dispensary at Bandapara (Dhupguri) and the closure of Khudnabari dispensary. Two Public Health Department dispensaries, viz., Awlachuka and Kharupotia dispensaries in the Darrang district were closed during 1936. Vigorous surveys and resurveys were carried on in the Nowgong district to detect even the early cases and to bring them under treatment. No dispensary was either closed or opened in the Sibhsagar district during 1936. The proposal to open Public Health Department Travelling dispensaries in the Garo Hills did not materialise during the year.

35. During the the year under report, 4,847 lepers received treatment in the Leper Asylums and other centres of treatment under the Medical and Public Health Departments and the Mission Leper Colony at Jorhat 296 and 571 lepers were treated as in-patients and out-patients respectively in the leper asylums at Sylhet and Gauhati, the leper hospital at Kohima, the leper Ward at Dhubri and the Leper Colony at Tura. A total of 1852 lepers received treatment in the lepers clinics under the Medical Department. A total of 1,999 lepers were treated in the Public Health Department dispensaries during the year under review, viz., 944 in Sylhet, 45 in Goalpara, 249 in Kamrup, 368 in Darrang 374 in Nowgong and 19 in Sibhsagar. The number of outdoor clinics in the Public Health Department for the treatment of Leprosy during the year was 62 against 61 in the preceding year. The Mission Leper colony at Jorhat treated 129 lepers during the year. One Medical Officer of the Public Health Department was trained locally in the technique of leprosy treatment during the year.

No special leprosy survey was undertaken during 1936 but according to the instructions of Dr. I. Santra village survey register is being maintained by the Sub-Assistant Surgeons of the Public Health Department. Sub-Assistant Surgeons of the Public Health Department undertake leprosy survey in conjunction with *kala-azar* surveys. Assistant Surgeons of the Public Health Department carried out propaganda work on leprosy with the aid of Magic lanterns during the year under review.

CHAPTER IV

EPIDEMIOLOGY

36. The mortality from cholera in Assam during the last 10 years has been as follows :—

1926	...	...	...	...	...	...	...	10,275
1927	...	...	...	...	...	...	...	15,392
1928	...	...	...	...	...	...	...	6,915
1929	...	...	...	...	...	...	...	7,765
1930	...	...	...	...	...	...	...	6,332
1931	...	...	...	...	...	...	...	5,523
1932	...	...	...	...	...	...	...	4,971
1933	...	...	...	...	...	...	...	5,508
1934	...	...	...	...	...	...	...	1,904
1935	...	...	...	...	...	...	...	7,436
1936	...	...	...	...	...	...	...	3,816

The Province remained free from any epidemic of cholera during the greater part of the year. Sporadic outbreaks were reported from time to time out of 148 circles of registration, cholera was reported from 103 circles. At the end of the year cholera occurred in an epidemic form in a few villages on the western part of the Nowgong district, cholera broke out in an epidemic form in the Sibsagar district in the months of May and June. Altogether 92 villages were effected with a total of 443 cases of whom 239 died.

CHAPTER V

FAIRS AND FESTIVALS

37. In the Cachar district, in two Melas, viz., Sidheswar and Bhuban Hill melas were held as on previous years. One other mela was held at Lalabazar during the year under review. About 5,000 people attended the Sidheswar Mela which lasted for a fortnight. The Bhuban Hill Mela lasted for 3 days and about 3,000 people attended. In the Lalabazar Mela about 500 people attended which lasted for 4 days. An agricultural Industrial and Cattle Exhibition was held at Hailakandi from the 19th to the 25th February 1936 and this was visited by about 2,000 people. A section of an Epidemic Unit attended the Sidheswar and Bhuban Hill Melas. Satisfactory sanitary arrangements were made and no case of any epidemic disease was reported from any of them. The Darranga fair was held, as usual, in the Kamrup district. There was also a large gathering of Pilgrims at Kamakhya Hill on the occasion of Hindu Festival "Ambubachi" in the same district. A Sub-Assistant Surgeon of the Gauhati Epidemic Unit was deputed to look after the sanitary arrangements. There was no outbreak of any epidemic disease. Small fairs were also held in the rural areas of the district during the year under report and the services of Medical Officers were made available almost everywhere.

There was a gathering of about eight to ten thousand people in the town of Dhubri during Brahma-putra snan (bathing). Suitable sanitary arrangements were made by the Dhubri Municipal Board. Medical camp was stationed in the mela ground and the Health Officer was deputed to look after sanitary arrangements and to render medical aid. Temporary latrines were constructed and arrangements were made for the supply of pipe water. The Parasuram Kunda pilgrimage in the Sadiya Frontier Tract was held on the 14th January 1936. The Compounder of Denning Civil Hospital was deputed to the pilgrimage. There was a gathering of about 4,000 people at Silghat in the Nowgong district during Austomi snan (bathing). A camp dispensary was opened under the charge of Sub-Assistant Surgeon, Silghat, and another Sub-Assistant Surgeon of the Public Health Department who was deputed for the purpose. The Assistant Surgeon, Public Health Department, also visited the place.

CHAPTER VI

URBAN SANITATION

(Including notified areas)

Municipal Water-supplies

38. While the number of Municipal Boards remained the same as in the previous year, viz., 17 the number of town committees has increased by one during the year by the constitution of a committee at Srimangal. The total income of these Boards and Town committees in 1936 was Rs.13,05,395 as against Rs.12,32,026 in the previous year. A sum of Rs.5,88,820 or 45.10 per cent. was spent on sanitary works original and recurring as compared with Rs.5,33,953 or 43.34 per cent. in 1935. As usual, the Director and the Assistant Directors of Public Health inspected the Municipalities and Small Towns and offered advice on public health matters. As pointed out in the inspection notes on various Municipalities, there is yet much room for improvement in every direction in the matter of public health of the towns in the Province.

The Public Works Department incurred a total expenditure of Rs.4,191 on the maintenance of water-supplies, drainage and town improvement as compared with Rs.33,04-6-0 in the preceding year.

CHAPTER VII

RURAL SANITATION

39. The total expenditure of 19 Local Boards on Public Health during the year 1936 amounted to Rs.1,78,719 as compared with Rs.1,45,480 in 1935. The health and prosperity of the rural population is a matter of vital importance and it is up to the Local Boards to spend a much larger amount on public health and especially on rural water supplies which are deplorably bad. Unless and until this is done, it will not be possible to satisfactorily deal with water borne diseases such as Cholera Dysentery and Diarrhœa. Public Health measures which are extensively carried out in rural areas are protection against Cholera by inoculation and issue of bacteriophage and against Small-pox by vaccination. *Kala-azar* treatment measures are being carried out on the usual lines as in the previous years. Quinine Reinforced Cinchona tablets for the treatment of Malaria are sold in all village Post Offices and through other accredited agents. Quinine and Cinchona Febrifuge are also supplied free to the indigent patients in all districts. Treatment of Yaws, Leprosy Malaria and minor eye complaints is also being undertaken by Public Health Department Dispensaries in rural areas. Adulteration of food-stuffs which is increasing in the province, is becoming a menace to public health. This can be controlled by sending samples to the Public Analyst for analysis and securing punishment for the vendors of adulterated articles of food. It is hoped that the Local Boards will realise their responsibility in the matter and will take steps to prevent adulteration.

CHAPTER VIII

MALARIA

40. Malarial fevers are the greatest scourge of the Province. It is prevalent throughout and almost constantly in epidemic form. As compared with 733,408 cases of Malaria treated in the previous year 633,534 cases were treated during the year under review in all hospitals and dispensaries in the plains districts, viz., 560,088 cases were treated in dispensaries under the Medical Department and 73,446 cases were treated in Public Health Department Dispensaries. The dispensaries under the Medical Department were responsible for the fall in the number of patients treated as during the year under review they treated 104,832 patients less than the number treated in the previous year. The Public Health Department dispensaries showed an increase of 4,958 patients. Separate figures of mortality from Malaria are not available. It has been noted in paragraph 25 that deaths from "Fevers" in 1936 amounted to 97,240 against 106,719 in 1935. A large percentage of deaths under "Fevers" is directly attributable to malarial fevers. Quinine Reinforced Cinchona Febrifuge was used as a general preventive and curative agent against Malaria. To bring this within the easy reach of the general population it has now been put up in treatments containing ten tablets of four grains and is sold at two annas per tube. As in previous years the Government of Assam gave a grant of Rs.25,000 to the Assam Medical Research Society for purposes of research. The Society's activities are confined mainly to researches on malaria at present. These activities are summarised in the following note supplied by the Research Officer :—

1. *Staff*.—During the year the staff has numbered 43, including 10 Sub-Assistant Surgeons, Public Health Department, who were deputed for one year's training in Malariology. One member of the staff completed the course in Malariology at Karnal.
2. *Training Class*.—The annual 8 weeks' course in Malariology was held during July and August and was attended by 15 qualified medical men. Of these, 8 were from the Public Health Department, 4 from the Medical Department, 2 Local Board nominees and 1 from a Tea Estate. Thirteen candidates passed the examination set at the end of the course.
3. *Malaria surveys*.—Three surveys previously undertaken have been continued and two new surveys, apart from the village control schemes, have been undertaken in the Surma Valley in which area we have considered further investigations necessary and desirable.
4. *Treatment schemes*.—The Doon Dooma treatment centre for the evaluation of the use of Plasmoquine in the field will complete its fifth year in December 1936. The spleen and parasite rates of 277 children (2—10 years) examined in November and December 1932, after one year's treatment were 56 and 41 per cent. respectively. In November and December 1935 the spleen and parasite rates of 214 children examined were 14.5 and 17.3 per cent., respectively.

Two groups of villages, one each in the Surma and Bramaputra Valleys, were selected for the treatment of malaria cases with Reinforced Cinchona Febrifuge with a view to acquainting the villagers with the beneficial results which can be obtained by adequate treatment. These village treatment schemes were financed jointly by the Local Board concerned and the Government of Assam.

5. *Entomological*.—Routine examinations carried out between 1st January and 30th September have included the identification of 81,259 anopheline larvae, and 8,777 adults. During this period 5,083 anopheline adults were dissected. Of these, 988 were *A. minimus* the only species found infected, with a sporozoite rate of 1.92 per cent. and oocyst rate of 3.84.

An as-yet undescribed Indian species of anopheline has been found during the course of one of the new surveys. This species is being studied in all its stages and a report is in course of preparation.

6. *Blood Examinations*.—During the first nine months of the year 7,135 blood specimens have been examined and 2,273 (31.85 per cent.) were found positive for malaria parasites.
7. *Malaria control*.—Two groups of villages, one in the Surma and one in the Bramaputra Valley, were selected for experimental cold weather and pre-monsoon anti-larval control. It is as yet too early to try to evaluate the efficacy of the control measures adopted but there appears to have been a considerable reduction in the malaria case incidence during the 1936 malaria season. A comparison of the spleen and parasite rates during comparable periods will be made and subsequently reported.

Four town areas in the Brahmaputra Valley of differing malaria intensity were selected for experimental cold weather and pre-monsoon anti-larval control. As in the case of the villages, it is too early to give any accurate evaluation of the results of the method used but so far as they have gone they appear most promising.

The experimental control measures advocate will be continued in 1937.

8. *Researches*.—Research on the cold weather bionomics of *A. minimus* give the following conclusions :—
 - (a) *A. minimus* bred out in January and February form a sufficient nucleus of this carrier species so that by early March when the prevailing mean temperatures conduce to the completion of the sporogony cycle to the sporozoite stage, they can be responsible for active transmission after that period.
 - (b) Stream breeding experiments, with appropriate laboratory controls, show that *A. minimus* does not winter in the larval stage.
 - (c) Due to continuous cold weather breeding, notwithstanding the low minimum temperatures experienced in Assam plains, there is maintained a constant supply of adult *A. minimus* throughout the cold weather.

- (d) Studies of the wing grades, ovarian stages and gut contents of adult *A. minimus* from December to March reveal no evidence of hibernation, over-wintering or gonotrophic dissociation.
- (e) The detection of blood in different stages of digestion in 96 per cent. of *A. minimus* caught at regular intervals from December to March and dissected on the same day they were caught and, from the observation that ovarian development continued uninterrupted in 1,122 specimens dissected 8 to 18 days after capture, where the ovarian development observed must have been dependent upon blood feeds having been taken, gives evidence that the feeding stimulus of this species is not inhibited by the minimum temperatures prevailing when suitable micro-climates are available.
- (f) There is no evidence to support the view that infected or uninfected *A. minimus* adults are carried over in the hibernating or other stages from November to March to be a responsible factor in the transmission of Malaria in March.
- (g) On dissection of *A. minimus* the oocyst rate which was 4.8 per cent. in December was reduced to 2.0 and 2.1 per cent. in January and February, but was subsequently increased to 8.6 per cent. in March.
- (h) On dissection of *A. minimus* the sporozoite rate was 1.8 per cent. in December, 0.3 per cent. in January nil in February and was increased to 2.6 per cent. in March.
- (i) The main factors considered responsible for reduction in the amount of transmission of malaria during January and February when mean temperatures are below 60°F are (a) the relatively short life of the vector species *A. minimus* and (b) the lengthened time required for the completion of the sporogony cycle.
- (j) The observations and findings described indicate that anti-larval operations directed specifically against *A. minimus*, to be effective in preventing the annual March—April rise in the malaria case incidence in the plains of Assam, should be started not later than 15th January, annually.
- Five years data representing the findings from 54 areas in Assam, and of the 31 anopheline species found, have been tabulated. The pertinent features of each anopheline species, e.g., the density of breeding in different types of water areas and, for each of the areas investigated, an estimation of the density of the larvae and adults present have been shown.

From dissection of 46,103 Assam anopheline specimens, five species have been found infected in the oocyst or oocyst and sporozoite stages. These species were :—

Species	Number dissected	Per cent. oocyst Infections	Per cent. Sporozoite Infections	Per cent. Total Infections
<i>A. culicifacies</i>	1,136	nil	0.35	0.35
<i>A. maculatus</i>	5,675	0.14	0.14	0.24
<i>A. maculatus</i> var <i>willmori</i>	1,085	0.18	nil	0.18
<i>A. minimus</i>	10,016	3.73	2.69	5.73
<i>A. philippinensis</i>	3,585	0.11	nil	0.11

Examinations of 69,562 sample blood specimens from the herd population of different parts of the Province with varying degrees of malarial intensity have shown *Plasmodium falciparum* to be the predominating species present. The numbers and percentage of those specimens found infected and with gametocytes from the 69,562—examinations were :—

Species	Number infected	Per cent. Infected	Number with Gametocytes	Per cent. with Gametocytes
<i>P. falciparum</i>	10,808	15.53	1,833	2.64
<i>P. vivax</i>	3,543	5.00	1,315	1.89
<i>P. Malariae</i>	1,822	2.62	1,321	1.91
Mixed Plas	1,214	1.75	764	1.10
All Infections	17,387	24.99	5,233	7.52

Two methods for larval drift prevention have been under investigation since 1934. Various improvements have been made during the year on the original methods.

A "Shaded Broad Drain Method for *A. minimus* Anti-larval Control" has been evolved.

A method for the estimation in the field of the arsenious acid content of Paris Green has been developed.

A lump provision of Rs. 25,189 was made by Government for the purposes of carrying out Anti-malarial measures in the Province.

The Provincial Advisory Malaria Committee held two meetings during the year to consider the relative merits of the scheme and to allot funds. Anti-malarial measures were carried out in the following areas :—

Cachar—Moibong Dittokcherra, Udarband and Haflong.

Sylhet—Jaintiapur, Haripur, Jagadishpur and Longai.

Goalpara—Dhubri, Gauripur, Kachugaon, Gossaingaon and Haltugaon.

Kamrup—Gauhati and Dishpur.

Darrang—Tezpur, Mangaldai and Tangla.

Nowgong—Nowgong, Lumding and Roha.

Sibsagar—Jorhat.

Lakhimpur—Doom-Dooma and North Lakhimpur.

Khasi and Jaintia Hills—Shillong and Nongpoh.

Garó Hills—Tura.

Naga Hills—Dimapur.

As no contribution was forthcoming from the Sibsaagar and Golaghat Municipal Boards, anti-malaria operations were stopped in those areas during the year under review. In view of the paucity of funds anti-larval measures on Government land adjacent to the Moabund Tea Estate were discontinued.

A preliminary malaria survey of the Sunamganj town undertaken at the suggestion of the Commissioner, Surma Valley and Hill Division revealed that the malaria incidence among the residents of the town is of a very low degree and on the recommendation of the Research Officer, Assam Medical Research Society the survey was discontinued. Anti-malarial measures were also undertaken at Pasighat and Lokra-Charduar with funds provided by the Government of India.

SALE OF QUININE

41. The following statement shows the amount of quinine treatments sold, district by district, during the year 1936 as compared with the amount sold in 1935 :—

Districts	Treatment parcels sold in 1936	Difference		Decrease
		1935	Increase	
1	2	3	4	5
Cachar	376	622	...	246
Sylhet	2,118	2,599	...	481
Goalpara	822	956	...	134
Kamrup	1,340	1,490	...	150
Darrang	542	599	...	57
Nowgong	764	1,058	...	294
Sibsagar	1,009	912	97	...
Lakhimpur	296	281	15	...
Khasi and Jaintia Hills	614	569	45	...
Naga Hills	75	63	12	...
Lushai Hills	1,100	1,152	...	52
Garo Hills	122	189	...	67
Sadiya Frontier Tract	86	63	23	...
Manipur	14	26	...	12
Total	9,278	10,579	192	1,493

The total number of parcels of quinine Reinforced Cinchona Febrifuge sold during the year was 9,278 against 10,579 in the preceding year, showing a decrease of 1,301 parcels. The decrease is mainly due to the fact that during the year large quantity of quinine was distributed free to the indigent malaria patients as detailed below. Besides the supply of quinine for sale was stopped for about two months and a half by the Director of Botanical Survey to make arrangements for the supply of smaller treatments of 10 tablets each. Out of the Government of India's free gift of 4,500 lbs. of quinine 1,500 lbs. were distributed as follows :—

Cachar	90 lbs.
Sylhet	510 "
Goalpara	135 "
Kamrup	171 "
Darrang	120 "
Nowgong	144 "
Sibsagar	120 "
Lakhimpur	60 "
Garo Hills	54 "
Khasi and Jaintia Hills	30 "
Naga Hills	30 "
Lushai Hills	36 "
Total	1,500 lbs.

The following quantities of Quinine and Cinchona Febrifuge were also obtained as usual for free distribution to indigent malaria patients in the badly affected areas of the undernoted plains districts :—

	Quinine sulph.	Cinchona
	lbs	lbs.
Cachar	8	25
Sylhet	50	80
Goalpara	16	9
Kamrup	6	30
Darrang	6	9
Nowgong	30	80
Sibsagar	10	35
Total	126	318

In the middle of November Quinine Reinforced Cinchona Febrifuge in treatments containing ten tablets of four grains was supplied to the Civil Surgeons for sale through Post Offices and other approved Agents at two annas per tube.

A statement showing, separately quantities in lbs. of (a) Quinine and (b) secondary alkaloids of Cinchona distributed free or at reduced price by the Public Health and Medical Departments and other sources during 1936 is appended below :—

	Public Health Department				Medical Department				Jail Department			
	Quinine		Cinchona		Quinine		Cinchona		Quinine		Cinchona	
	Free	On payment	Free	On payment	Free	On payment	Free	On payment	Free	On payment	Free	On payment
Cachar	Lbs. oz. dr. gr. 58 15 2 34	Lbs. oz. dr. gr. ..	Lbs. oz. dr. gr. 13 10 4 10	Lbs. oz. dr. gr. ..	Lbs. oz. dr. gr. 9 15 3 0	Lbs. oz. dr. gr. ..	Lbs. oz. dr. gr. 14 2 7 0	Lbs. oz. dr. gr. ..	Lbs. oz. dr. gr. 1 8 0 0	Lbs. oz. dr. gr. ..	Lbs. oz. dr. gr. 1 0 0 0	Lbs. oz. dr. gr. ..
Sylhet	50 0 0 0	..	80 0 0 0	..	..	..	..	..	..	..	..	..
Goalpara	139 0 0 0	..	6 0 0 0	85 10 0 0	..	..	..	..	..	..	..	..
Kamrup	165 15 4 0	..	207 7 0 0	166 10 5 20	62 11 4 0	..	30 7 0 0	..	..	..	..	..
Darrang	24 1 0 0	..	5 10 0 0	..	..	..	..	..	..	..	..	..
Nowgong	39 9 0 0	..	41 0 0 0	79 9 2 40	61 0 0 0	..	139 0 0 0	..	7 8 0 0	..	2 0 0 0	..
Sibsagar	5 0 0 0	..	3 0 0 0	..	35 0 0 0	..	12 0 0 0	..	..	..	..	..
Lakhimpur	18 4 0 0	..	7 7 6 0	30 13 2 40	73 4 4 0	3 0 0 0	20 4 0 0	9 0 0 0	11 10 3 0	..	0 7 0 0	..
Khasi and Jaintia Hills	14 4 0 0	..	..	..	54 9 0 0	3 0 0 0	55 3 0 0	9 0 0 0	2 12 0 0	..	1 6 0 0	..
Naga Hills	..	..	..	..	86 0 0 0	..	81 0 0 0	..	..	..	..	..
Lushai Hills	..	..	17 10 4 0	114 9 2 40	100 0 0 0	8 15 0 2	80 0 0 0	..	6 0 0 0	..	2 0 0 0	..
Sadiya Frontier Tract	..	..	..	..	80 0 0 0	..	..	..	..	..	..	..
Garro Hills	44 14 3 13	..	..	13 15 1 10	24 11 3 5	..	5 0 0 0	..	2 12 0 0	..	..	..
Total	559 15 1 47	..	381 13 6 20	491 3 6 30	587 3 6 5	14 15 0 2	437 0 7 0	18 0 0 0	32 2 3 0	..	6 13 0 0	..

Police and Assam Rifles Hospitals				Local Fund				Other Departments			
Quinine		Cinchona		Quinine		Cinchona		Quinine		Cinchona	
Free	On payment	Free	On payment	Free	On payment	Free	On payment	Free	On payment	Free	On payment
Cachar	Lbs. oz. dr. gr. 11 0 0 0	Lbs. oz. dr. gr. ..	Lbs. oz. dr. gr. 4 2 0 0	Lbs. oz. dr. gr. ..	Lbs. oz. dr. gr. 63 0 9 52	Lbs. oz. dr. gr. 100 3 4 0	Lbs. oz. dr. gr. ..	Lbs. oz. dr. gr. 435 0 0 0	Lbs. oz. dr. gr. ..	Lbs. oz. dr. gr. ..	Lbs. oz. dr. gr. ..
Sylhet	..	..	..	..	..	..	..	..	..	..	..
Goalpara	..	..	..	..	..	..	..	..	..	..	..
Kamrup	..	..	..	..	..	..	..	..	..	..	..
Darrang	..	..	..	..	..	..	..	..	..	..	..
Nowgong	17 8 3 40	..	1 0 0 0	..	69 15 0 0	8 7 4 0	..	1 2 6 0	..	..	..
Sibsagar	..	..	..	..	..	..	..	..	..	..	..
Lakhimpur	..	..	..	..	..	..	..	..	..	..	..
Khasi and Jaintia Hills	..	..	..	..	..	..	..	..	..	..	..
Naga Hills	..	..	..	..	..	..	..	..	..	..	..
Lushai Hills	30 0 0 0	..	20 0 0 0	..	..	..	..	11 0 0 0	..	5 0 0 0	..
Sadiya Frontier Tract	..	..	..	..	..	..	..	..	..	..	..
Garro Hills	19 4 0 0	..	..	..	..	..	..	..	..	..	..
Total	77 12 3 40	..	25 2 0 0	..	132 15 9 52	108 11 0 0	..	447 2 6 0	..	5 0 0 0	..

CHAPTER IX

MATERNITY AND CHILD WELFARE

42. The number of child welfare centres during the year under report remained the same, *viz.*, 5 as in the preceding year. The work of the Dai training classes at Silchar, Karimganj and Sylhet were satisfactory during the year. The centre at Doom Dooma continued its work during the year. A total of 36,152 infants died during 1936, giving a rate of 150·82. During the year 99 infants died daily in the province. This appalling rate of mortality of infants can be reduced considerably if larger number of up-to-date Maternity and Child Welfare centres are opened throughout the Province and larger number of midwives are made available. It is gratifying to note that out of the Silver-Jubilee funds returnable to districts a sum of Rs.18,165 have been earmarked for the maternity and childwelfare work throughout the Province. The maternity and infant mortality rates recorded in rural areas were ·68 and 151·36 respectively and that in Urban areas were 1·54 and 131·04 respectively. The death-rate of children under 5 years was 67·20. No method was employed to estimate maternal and infant mortality rates. The high mortality rate is due to lack of knowledge regarding maternity and child welfare. Child Welfare and Maternity organisation is in the hands of the Red Cross Society. There is no Health Visitor Training School in the Province and there is no provision for the inspection of welfare centres. During the year, no Municipality organised any schemes for Maternity and Child Welfare centres. No other attempt except propaganda with the aid of Magic lantern demonstrations was made to reach rural areas with maternity and child welfare work. There was no specialised work for women and children in industrial areas. No portion of the Public Health Department's budget was allocated to Maternity and Child Welfare. During the year under report 19 midwives were entertained in Urban areas and 5 in Rural areas. The number of beds remained the same, *viz.*, 35 as in previous year. After the close of the year, a new block in the Dibrugarh Hospital named Narsing Das Jalan Maternity and Gynaecological Ward consisting of 12 beds was opened. Accurate figures are not available regarding proportion of births delivered in hospitals by private doctors, by trained midwives, by untrained midwives and without attendants. The Nari Sikshasram School at Silchar provides a course lasting for a year to a class of 15 students. The course is in accordance with the syllabus of the Victoria Memorial Scholarship Fund. Facilities for the training of indigenous Dais exist in the towns of Sylhet, Karimganj, Goalpara and Dhubri. Public examinations are held at Dibrugarh, Sylhet and Karimganj. Midwives are not registered in the Province and there is no provision for inspection of midwives. There is no bye-law in any Municipality for controlling the practice of midwives. The position in respect of midwives is improving in the Province. Salaried midwives are employed by Municipalities and Local Boards. Propaganda and health instruction is necessary for the advancement of Child and Welfare Maternity work. Ignorance and prejudice on the part of the bulk of the population and lack of funds are the chief hindrance to the advancement of this work.

Two statements giving the strength and distribution of the health services and Maternity and Child Welfare centres, etc, in Urban and Rural areas in Assam during 1936 are attached.

Table showing Maternity and Child Welfare Centres health visitors and trained midwives in Rural and Urban areas in Assam Province during 1936

[illegible]

Table showing health services in Rural and Urban areas in Assam during 1936

RURAL AREAS										URBAN AREAS										
Districts	Medical Officers of Health				Epidemic Staff	Sanitary and Health Inspectors	Vaccinators		School Medical Officers	Other health staff	Medical Officers of Health				Sanitary and Health Inspectors	Vaccinators		Inspector of Vaccination and Sub-Inspector of Vaccination	School Medical Officers	Other staff
	Holding Licentiates D. P. H. (L. P. H. S.)						Whole time	Part time			Whole time	Part time	Whole time	Part time		Male	Female			
	Whole time	Part time	Whole time	Part time																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		20	21
Cachar	30	..	..	..	..	..	..	..	1	1	..	I. V.—1 } S.-I. V.—2 }	..	1 Sub-Assistant Surgeon employed on Public Health duty.
Sylhet	6 S.-A. Ss. 12 D. Cs.	..	106	..	..	..	..	..	..	..	3	9	..	I. V.—1 } S.-I. V.—8 }	..	1 Assistant Surgeon and 39 Sub-Assistant Surgeons employed on Public Health duty.
Khasi and Jaintia Hills	8	..	..	..	1	..	..	..	2	1	..	I. V.—1 } S.-I. V.—1 }	..	3 (1 Assistant Surgeon at Public Health Laboratory, 1 Biochemist and 1 Sub-Assistant Surgeon at Vaccine Depot).
Naga Hills	4	..	..	..	..	..	..	..	..	2	..	S.-I. V.—1 } S.-I. V.—1 }	..	..
Lushai Hills	8	..	..	..	..	..	..	..	..	..	..	S.-I. V.—1 } S.-I. V.—1 }	..	..
Goalpara	3 S.-A. Ss. 6 D. Cs.	..	43	..	..	..	..	..	..	..	2	3	..	S. V.—1 } S.-I. V.—4 }	..	1 Assistant Surgeon and 3 Sub-Assistant Surgeons employed on Public Health duty.
Kamrup	3 S.-A. Ss. 6 D. Cs.	..	51	..	..	..	..	..	..	..	1	4	..	I. V.—1 } S.-I. V.—3 }	..	1 Assistant Surgeon and 13 Sub-Assistant Surgeons employed on Public Health duty.
Darrang	41	..	..	..	..	..	..	..	1	2	..	I. V.—1 } S.-I. V.—2 }	..	1 Assistant Surgeon and 5 Sub-Assistant Surgeons employed on Public Health duty.
Nowgong	3 S.-A. Ss. 6 D. Cs.	..	26	..	..	..	..	..	..	..	1	1	..	I. V.—1 } S.-I. V.—1 }	..	1 Assistant Surgeon and 12 Sub-Assistant Surgeons employed on Public Health duty.
Sibsagar	45	..	..	..	..	..	..	..	1	4	..	I. V.—1 } S.-I. V.—3 }	..	1 Assistant Surgeon and 6 Sub-Assistant Surgeons employed on Public Health duty.
Lakhimpur	32	..	..	..	..	..	..	..	2	4	..	I. V.—1 } S.-I. V.—2 }	..	2 Sub-Assistant Surgeons employed on Public Health duty.
Garo Hills	7	..	..	..	..	..	..	..	..	..	..	S.-I. V.—1 } S.-I. V.—1 }	..	Public Health duty.
Manipur State	9	..	..	..	..	..	..	..	..	4	..	S.-I. V.—2 } S.-I. V.—2 }	..	5 Sub-Assistant Surgeons employed on Public Health duty.
Sadiya Frontier Tract	4	..	..	..	..	..	..	..	1	1	..	S.-I. V.—1 } S.-I. V.—1 }	..	..
Balipara Frontier Tract	1	..	..	..	..	..	..	..	..	..	..	....	..	..

CHAPTER X

SCHOOL HYGIENE AND MEDICAL INSPECTION OF SCHOOL CHILDREN

43. During the year under review the Assistant Directors of Public Health could not devote much attention to the hygienic conditions of schools as they were fully occupied with epidemic and other important duties. The Assistant Director of Public Health, Assam Valley Division, during the course of his tours, inspected the hygienic conditions of two schools and delivered lectures to the pupils and teachers on preventible diseases and on personal hygiene. Periodical medical inspections of selected institutions were carried out and recommendations made for the improvement of the health of boys and girls and general sanitation of the schools and hostels attached thereto by the Medical Officers in charge.

Hygiene is taught in the Primary and Secondary schools of the Province the course of which is as follows—

Class A, B, and Class I.—Importance of personal cleanliness, care of nails, teeth and hair, avoidance of insanitary habits, *e.g.*,

Spitting, cleaning state, with saliva, keeping school house and compound neat and clean.

Class II.—Cleanliness of person and belonging (clothing, bedding, etc.) posture, exercise, bathing, instruction from health chart in regard to epidemic diseases, their causes and prevention, keeping school house and compound neat and clean.

Class III.—Instruction from health chart as in class II, extended to cover the danger of opium and other habit forming drug, *e.g.*, alcohol, tobacco, and the advantage of temperance and of fresh air and pure drinking water, keeping school house and compound neat and clean.

Class IV.—(a) Hygiene, sanitation and temperance to be studied from an elementary text book.

(b) Work in school garden, (c) keeping school house and compound clean.

Class V and VI.—Hygiene and elementary science on nature study from approved text book.

Class VII and VIII.—Persons on the above lines continued from approved text book.

Hygiene also form an optional subject in the Matriculation Examination.

CHAPTER XI

HEALTH PROPAGANDA

44. Public Health Propaganda with the aid of magic lanterns was carried out by the Assistant Surgeons of the Public Health Department in the course of their inspection of dispensaries. The subjects dealt with included common prevalent diseases such as Malaria, Kala Azar, Tuberculosis, Smallpox, Leprosy and also general sanitation and food. The expenditure was partly met from the Public Health Budget and partly from the King George Thanksgiving (Anti-Tuberculosis) Fund.

KING GEORGE THANKSGIVING (ANTI-TUBERCULOSIS) FUND

45. During the year under review some coloured slides on tuberculosis were purchased and supplied to the Civil Surgeons of Sylhet and Nowgong districts. The Nowgong district Anti-Tuberculosis sub-committee continued its propaganda work as in the last year.

CHAPTER XII

PUBLIC HEALTH ADMINISTRATION

46. The financial condition of the Province during the year under review was not such as would permit of any expansion of the Department.

The budget allotments for the years 1935-36 and 1936-37 amounted to Rs.6,74,100 and Rs.7,58,900 respectively while those for the heads administered directly by the Director of Public Health amounted to Rs.5,59,355 and Rs 6,01,206 respectively.

The receipts of the Department for the years 1935-36 and 1936-37 amounted to Rs.1,11,209-15 and Rs.1,06,868 respectively.

The strength of the Public Health Department during the year was as follows :—

1. Director of Public Health	...	...	1	
2. Assistant Directors of Public Health	...	...	2	(The post of 1 Assistant Director of Public Health was vacant from the 9th July 1936 to the end of the year.)
3. Assistant Surgeons	...	...	7	(Three permanent and 4 temporary.)
4. Urban Health Officers...	...	...	9	
5. Sub-Assistant Surgeons	...	...	104	(Eighty-three permanent and 21 temporary.)
6. Vaccination inspecting staff	...	...	39	
7. Clerks	...	...	27	
8. Biochemist	...	...	1	
9. Compounders	...	...	4	(temporary.)
10. Literate packers	...	...	2	
11. Loaders	...	...	2	
12. Disinfectant Carriers	...	...	30	
13. Sample taker...	...	...	1	
14. Laboratory Assistants and Media Maker...	...	...	13	
15. Vaccinators appointed by Government in Hill Districts.	...	...	37	
Vaccinators appointed by Local Boards	...	...	372	
" " by Municipalities	...	...	28	
" " by Development Board	...	...	2	
16. Servants	...	...	125	
17. Magic Lantern Operators	...	...	6	(temporary.)

The Shillong Municipal Board entertains a fully qualified Health Officer whose salary is met in part by a contribution from Government.

During the year 83 Sub-Assistant Surgeons of the Public Health Department were made permanent out of the total strength of 104 including the Sub-Assistant Surgeon of the Vaccine Depot; the remaining 21 Sub-Assistant Surgeons will continue as temporary.

CHAPTER XIII

VACCINATION

This chapter and all statistical tables connected therewith refer to the period from April 1st, 1936 to March 31st, 1937.

Introductory. 47. Vaccination was performed, as usual, throughout the Province, amongst a population of 9,247,857.

48. The total number of Vaccinators employed during the year was 451 as compared with 434 in the preceding year. Vaccination among the general population was performed by Departmental Vaccinators and among the labour force of the Tea Estates by the Tea Garden Medical Officers. Railway employees were vaccinated by the Railway Medical Officers and in Jails by Sub-Assistant Surgeons in Medical charge. The average number of persons vaccinated by each Vaccinator was 1,935 during the year under report as compared with 1,965 in the preceding year.

49. The total number of operations performed during the year by all Agencies was 872,626 of which 437,917 were primary and 434,709 re-vaccinations as compared with 852,685 in the preceding year of which 428,982 were primary and 423,703 re-vaccinations. This shows an increase of 8,935 and 11,006 in primary and re-vaccinations respectively. Variations in the district returns are criticised in paragraph 55.

The total number of operations performed by different agencies during the year under report and in the previous year is shown below:—

						1936-37	1935-36
Number of operations by Departmental Vaccinators						789,533	767,542
Ditto	ditto	by Staff of Dispensaries	...	...	...	9,728	16,176
Ditto	ditto	by Tea Garden Agencies	...	...	...	66,929	62,543
Ditto	ditto	by Jail Asylum, Police and Emigration	Hospital agencies.			4,502	5,474
Ditto	ditto	by Railway agencies	...	...	...	1,934	943
Ditto	ditto	by Private Medical Practitioners	...	...	...	...	7
Total						872,626	852,685

Vaccinations by Departmental Vaccinators. 50. The number of operations performed by Departmental Vaccinators during the year shows an increase of 21,991 operations over the figure of the preceding year.

Deaths from smallpox. 51. A total of 1,244 deaths from smallpox occurred in the Province, including Hill districts during the year 1936-37 is as shown below:—

Cachar	...	...	...	...	...	...	35
Sylhet	...	...	...	...	...	...	676
Khasi and Jaintia Hills	...	...	...	...	...	...	...
Naga Hills	...	...	...	...	...	...	...
Lushai Hills	...	...	...	...	...	...	...
Goalpara	...	...	...	...	...	...	3
Kamrup	...	...	...	...	...	...	268
Darrang	...	...	...	...	...	...	34
Nowgong	...	...	...	...	...	...	31
Sibsagar	...	...	...	...	...	...	22
Lakhimpur	...	...	...	...	...	...	2
Garohills	...	...	...	...	...	...	...
Manipur	...	...	...	...	...	...	173
Sadiya	...	...	...	...	...	...	...
Balipara	...	...	...	...	...	...	...
Total						1,244	

The ratio of deaths from small-pox during the year was .12 per mille of population as compared with .07 in the preceding year. The death-rate reported from smallpox was highest in the district of Kamrup (.27) against (.26) in the preceding year. The death-rate reported from Sylhet was .25 against .04 in the preceding year. The lowest rate (.002) was reported from Lakhimpur district.

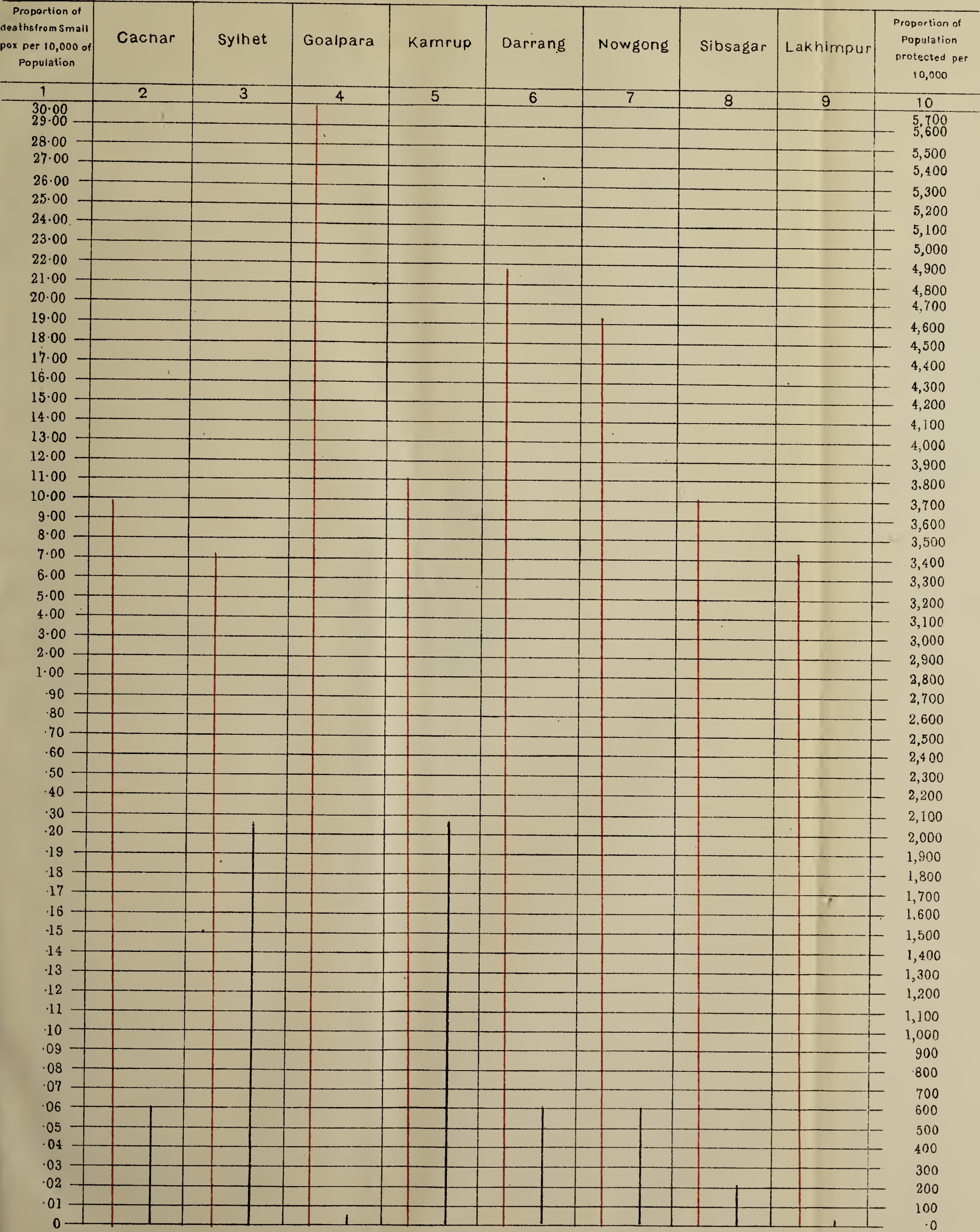
The attached chart illustrates the death-rates from smallpox in each district side by side with the proportion of population protected against the disease by vaccination during the 7 years from 1930-31 to 1936-37.

52. Vaccination in rural areas in Assam is not compulsory, but every encouragement is given to the people to get themselves vaccinated. In certain localities there is Marked opposition to vaccination. To overcome this regulations under the Epidemic Diseases Act, 1897 (Act III of 1897) are resorted to and these areas are declared to be small pox infected areas. During the year under report, the Barchala, Dhekiajuli and Behali mauzas in the Tezpur subdivision and Barchilajhar and Hindughopa mauzas in the Mangaldai subdivision of the Darrang district, Badripar, Singirbund and Uttar-Krishnapur in the Silchar subdivision of the Cachar district, Debultar, Sonasar, Saygharia, Humartal and Pillakandi villages in the Karimganj subdivision of the Sylhet district, Tarani, Morowa, Gurmow, Burka, Bongaltala, Uzankuri, Majorkuri, Majgaon, Tiling-gaon, Dhing Satra, Kayakuchi and Jiakur in the Gauhati subdivision and Bhugpur, Bangaon Barga, Sorbhog-Bazar, Jakuapara, Dekarbori in the Barpeta subdivision of the Kamrup district and the whole of Goalpara district were declared as smallpox infected areas.

53. A total of 9,728 vaccinations were performed by dispensary staff of which 2,388 were primary and 7,340 were re-vaccinations as compared with 16,176 in 1935-36.

Dispensary Vaccination.

The following diagram illustrates the death rates from Small-pox in each District for the year 1936-37 side by side with the proportion of the population protected against the disease by Vaccination during the seven years 1930-31 to 1936-1937.



NOTE Black lines indicate death rate from Small-pox
Red lines indicate the proportion protected by Vaccination

54. The percentage of successful operations performed by all establishments combined was 88·08 for primary vaccination and 67·48 for re-vaccination as compared with 93·44 and 65·32 respectively in the previous year. The successful percentage in primary vaccinations and revaccinations in the case of dispensary staff was 87·03 and 68·35 as against 88·56 and 59·50 respectively in the year 1935-36. Quality of lymph supplied, during the year, was good. The lymph gave cent. per cent. or very high per cent. success every where.

55. All vaccinations were performed as in previous years with glycerinated calf lymph manufactured in the Provincial Vaccine Depot at Shillong.

Vaccination work in different district.

56. The following table shows the increase and decrease in vaccination operations performed in individual districts, as compared with the preceding year—

	1936-37 Total	1935-36 Total	Increase	Decrease
Cachar	51,151	49,163	1,988	...
Sylhet	216,103	173,608	42,495	...
Khasi and Jaintia Hills	23,985	42,225	...	18,240
Naga Hills	17,609	10,719	6,890	...
Lushai Hills	10,116	10,348	...	232
Goalpara	102,066	88,961	13,105	...
Kamrup	81,932	115,297	...	33,365
Darrang	79,640	80,141	...	501
Nowgong	64,223	59,131	5,092	...
Sibsagar	83,342	73,254	10,088	...
Lakhimpur	50,378	57,480	...	7,102
Garro Hills	19,219	22,423	...	3,204
Manipur State	67,318	55,560	11,758	...
Sadiya Frontier Tract	4,914	13,540	...	8,626
Balipara Frontier Tract	630	835	...	205
Total	872,626	852,685	19,941	...

The increase in the Sylhet district is the highest (42,495). Normally a Vaccinator is expected to perform 250 vaccination operations in a month in the vaccination season. In the Sylhet district it is much in excess of this. The fall of 33,365 in the Kamrup district is due to the fact that there was no epidemic of smallpox in the Kamrup district during the year under report. No vaccination operations were performed by dispensary staffs in the district of Cachar and Kamrup.

57. The Subordinate Inspecting Staff was same as in previous years and consisted of 9 Inspectors and 30 permanent Sub-Inspectors of Vaccination and 2 Sub-Inspectors of Vaccination were entertained by the Manipur State.

58. In towns, where vaccination is compulsory, 7,064 infants were born and of these 810 died. A total of 6,254 infants were therefore available for vaccination. A total of 2,698 or 43·14 per cent. were successfully vaccinated as compared with 52·27 per cent. during the previous year. In Maulvibazar town 82·57 per cent. of the available infants were vaccinated. In other towns the percentage of vaccinated children was—Gauhati (74·69), Karimganj (73·75), Silchar (65·28), Barpeta (60·58), Doom Dooma (60·00), Nowgong (59·25), Sylhet (56·06), Jorhat (52·23), Gauripur (48·53), Goalpara (39·59), Mangaldai (33·90), Palashbari (25·42), Tezpur (23·85), Dibrugarh (23·65), Tinsukia (21·60), Shillong (21·49), Dhubri (20·91), Sunamganj (17·71), Nazira (17·07), Habiganj (14·14), Sibesar (10·24). Absurdly low rates were returned from Golaghat (9·92), Hailakandi (2·78) and in Sreemangal town (2·04).

In rural compulsory areas under Village Authorities in Sylhet and Nowgong districts 4,162 and 5,662 operations were performed as compared with 2,071 and 3,156 respectively in the previous year. During the year under report 2,220 operations were performed under Village Authorities in the Sibesar district.

59. During the year under review 12,992 grammes of vesicles were collected and 1,009,516 tubes of lymph were loaded in the Vaccine Depot, Shillong, as compared with 14,074 grammes of vesicles and 1,100,209 tubes of lymph in the previous year. A total of 1,017,798 tubes was issued during the year. Each tube contains sufficient vaccine lymph to vaccinate one person. The number of calves purchased and inoculated during the year under report was 688 (including 13 of the previous year) but lymph was taken from 595 calves. A total of 93 calves were rejected, 40 on account of failure of operations, 8 on account of unsatisfactory vesicles and 45 on account of illness as compared with 20, 10 and 70 in the preceding year.

The average number of tubes prepared per calf was 1,697 as compared with 1,834 in 1935-36. The total cost of working of the Vaccine Depot was Rs.18,979 of which Rs.6,486 was on establishment, Rs.3,805 on purchase of calves, Rs.88 on feed of calves, Rs.4,670 on purchase of capillary tubes and instruments and Rs.3,924 on miscellaneous expenditure, as compared with Rs.19,904 in the preceding year. Lymph was, as usual, supplied free throughout the year to Civil Surgeons, Inspectors and Sub-Inspectors of Vaccination. Local and Municipal Boards, Tea Gardens, Railway, Military Departments, Mission Hospitals. Manipur State, Sadiya and Balipara Frontier Tracts and Private individuals were supplied with the lymph on payment at the rate of one anna per tube.

The subordinate charge of the Vaccine Dépôt was held by Rai Sahib Dr. Aswini Kumar Purkayastha from 1st April 1936 to 15th March 1937 and by Sub-Assistant Surgeon Dr. Sudhiranjan Bhattacharjee from the 16th March 1937 to the 31st March 1937.

60. The total expenditure (including the charges of the Vaccine Dépôt) on vaccination in Assam during the year under report was Rs.1,09,364-10-0 as compared with Rs.1,19,139-1-3 in previous year. The average cost of each successful vaccination during the year was annas three and pies three only as compared with annas three and pies six in the previous year.

61. Primary vaccinations and re-vaccinations performed by the Dispensary staff numbered 2,388 and 7,340 respectively, by Tea Garden Medical Officers 30,628 and 36,301 respectively, by Medical Officers in-charge of Jail Hospitals, Mental Hospitals, Police Hospitals and Infectious Diseases Hospitals 152 and 4,350 respectively, by Railway Medical Officers 343 and 1,591 respectively. Their successful percentages were 87·03 and 68·35, 92·89 and 76·50, 88·89 and 57·28 and 97·90 and 70·80 respectively.

62. The Inspectors and Sub-Inspectors of Vaccination of the Public Health Department performed their duties efficiently and satisfactorily.

CHAPTER XIV

OTHER PUBLIC HEALTH SERVICES

63. The principal industry in the Province is the cultivation and manufacture of tea. Sanitary conditions on tea gardens are generally satisfactory. Special Regulations exist under the Emigration Labour Act, 1932, for the supervision of sanitary conditions in Tea Estates. Sanitations in factories and offensive trades are controlled by the provisions of the Indian Factories Act. The Assistant Directors of Public Health have now been appointed additional Inspectors of Factories within their respective jurisdiction to see that the provisions of sections 13 to 21 of the Factories Act are properly observed in the Factories.

64. The Civil Surgeon, Naga Hills, inspected the sanitary conditions of Barjan colliery. The Assistant Director of Public Health, Assam Valley Division, inspected the sanitary conditions of Bura Goloi and Ledo mines during the year under review. The Civil Surgeon, Lakhimpur, undertook no inspection of mines during the year. There is no mine under the jurisdiction of the Assistant Director of Public Health, Surma Valley and Hill Division.

65. The subjoined table shows the work done in the Public Health Laboratory in 1936, as compared with that of the preceding year :

	1936		1935	
	Number examined	Number found adulterated	Number examined	Number found adulterated
1	2	3	4	5
Chemical analysis of water	288	...	105	...
Ditto Butter	2	...	15	...
Ditto Ghee	168	90	164	85
Ditto Milk	327	123	359	156
Ditto Mustard oil	111	17	155	66
Ditto Linseed oil	2	1	5	2
Ditto Rice	4	...	3	2
Ditto Paraffin ... ..	...	...	1	...
Ditto Oil cake	1	...	...	...
Ditto Sago	1	...	...	...
Ditto Soji	1	...	...	...
Ditto Sugar	7	...	5	...
Ditto Tea	52	28	36	10
Ditto Wheat flour	30	1	22	10
MISCELLANEOUS CHEMICAL ANALYSIS				
Bacteriological analysis of water ...	514	...	550	...
Ditto of Vaccine lymph ...	492	...	480	...
Total	2,000	260	1,900	331

The number of samples analysed during 1936 was 2,000 against 1,900 in the year 1935. This shows an increase of 100 samples of food-stuffs over that of the preceding year which were analysed during the year under review. As usual bacteriological and chemical examinations of all water works and of jail water supplies were carried out systematically throughout the year. Laboratory also functioned as the Provincial Dépôt for the supply and despatch of Urea-stibamine and spare parts of syringes to Public Health Department dispensaries.

Dr. Surendra Chandra Datta held charge of the Laboratory throughout the year.

Name of Local Boards	1	2	3	4	5	6	7	8	9	10	11
	Number of samples purchased	Number of samples sent for analysis	Number of samples found adulterated	Number of prosecutions instituted	Number of convictions secured for 1st offence	Number of convictions secured for subsequent offences	Amount of fine or imprisonment for each first offence (average)	Amount of fine or imprisonment for each subsequent offence (average)	Nature of offences	Total amount of fine realised during 1936	Remarks
South Sylhet Local Board	Rs. a. p.	Rs. a. p.	The difficulty lies in detection and securing evidence. More vigilance is needed. The Hat mohaldars of the Local Board hats have been warned not to allow to sell adulterated things in their <i>Hatkholas</i> . The Deputy Commissioner, Kamrup, has also been requested to issue warnings to the people at large through the Sub-Deputy Collectors, Mauzadars and Goanburas.
Barpeta Local Board	
Dibrugarh Local Board	
Hailakandi Local Board	
Mangaldai Local Board	
Jorhat Local Board	
Karimganj Local Board	
Silchar Local Board	
Nowgong Local Board	..	1	1	1	1	..	20 0 0	..	Adulterated	20 0 0	
Habiganj Local Board	
Golaghat Local Board	
North Lakhimpur Local Board	
Sibsagar Local Board	
North Sylhet Local Board	
Tezpur Local Board	
Goalpara Local Board	
Dhubri Local Board	
Sunamganj Local Board	
Gauhati Local Board	

Statement of the working of the Assam Pure Food Act in the Municipalities during the year 1936

Name of Municipal Boards	Number of samples purchased	Number of samples sent for analysis	Number of samples found adulterated	Number of prosecutions instituted	Number of convictions secured for 1st offence	Number of convictions secured for subsequent offences	Amount of fine or imprisonment for each offence (average)	Amount of fine or imprisonment for each subsequent offence (average)	Nature of offences	Total amount of fine realised during 1936	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
Shillong Municipal Board.	186	185	71	71	45	...	Rs. a. p. 9 12 5	...	Adulterated milk.	Rs. a. p. 440 0 0	The amount of fine inflicted had been unjustifiably low, owners could not be prosecuted under the Act. It has been a serious defect. The main offenders safely carried out their business while the poor servants had been hauled up in the court. These servants had been discharged in 20 cases and could not be subsequently traced and the cases against them had to be struck off. There has been every reason to believe that adulteration of food-stuffs has increased enormously so much pure articles of food have become a rarity in the capital of the Province of Assam. Unwholesome food articles are sold without any check. The Board has got no control over bazars and other selling places as the Act is not in force in the administrated areas.
Sylhet Municipal Board.	54	54	11	8	6	...	44 0 0	...	Adulterated mustard oil and ghee.	265 0 0	Of the 11 samples declared adulterated, 8 of which were sent for prosecution. Of this 6 was convicted and fined and the remaining five were disposed of by the Chairman.
Habiganj Municipal Board.	6	6	3	3	3	...	13 0 0	...	Adulterated ghee and milk.	40 0 0	
Doom Dooma Town Committee.	...	...	...	...	...	...	...	...	...	...

Karimganj Municipal Board.	11	11	1	3	...	...	...	...	Adulterated ghee.	24	0	0	It seems that there have been a decided improvement in the quality of food-stuff and articles sold in the market of Karimganj. This reflects great credit on the Urban Health Officer who has taken considerable pains on propaganda work in the market area for improvement of articles of food and drink.
Maulvibazar Municipal Board.	11	9	6	6	2	...	32	8	0	65	0	0	Rupees 44 has been realised as cost of cases from offenders at Rs. 11 in each case.
Nowgong Municipal Board.	23	23	1	...	...	...	...	...	Adulterated ghee unfit for human consumption.	...	...	...	One sample which was found adulterated was compromised on payment of Rs. 15 as it was the first offence.
Nazira Town Committee.	4	4	2	2	1	...	5	0	0	5	0	0	
Sunamganj Municipal Board.	...	...	...	...	...	...	...	...	...	...	...	...
Silchar Municipal Board.	66	66	24	4	4	...	105	8	0	105	8	0	(a) One case for adulterated ghee was not prosecuted and only the cost was realised from the vendor in a resolution of the Board whereas other case of adulterated ghee was prosecuted, (b) one prosecution was instituted for two samples of adulterated ghee, (c) one case of adulterated tea and one case of adulterated mustard oil were also prosecuted. For other 18 adulterated samples of foodstuffs no prosecution has yet been filed and the matter is still under consideration of the Board. Under sections 16 and 17 of the Assam Pure Food Act, foodstuffs seized 20 in number were destroyed. Locally 2,842 milk samples were examined. Seventy-five were found adulterated. Under Silchar Municipal bye-laws 60 were destroyed, 18 prosecuted, 16 were convicted with a total fine of Rs.225 and 2 acquitted. According to Municipal bye-laws 11 more prosecutions were also instituted for prepared foodstuffs, 7 were convicted with a total fine of Rs. 15-8-0 and 2 absconded and 2 cases were withdrawn on payment of cost of the accused.

Name of Municipal Boards	Number of samples purchased	Number of samples sent for analysis	Number of samples found adulterated	Number of prosecutions instituted	Number of convictions secured for 1st offence.	Number of convictions secured for subsequent offences	Amount of fine or imprisonment for each first offence (average)	Amount of fine or imprisonment for each subsequent offence (average)	Nature of offences	Total amount of fine realised during 1936	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
Tezpur Municipal Board.	11	11	6	7	6	...	Rs. a. p. 110 0 0	...	Adulterated milk, ghee and mustard oil.	Rs. a. p. 110 0 0	Seven persons in all were sent up for prosecution one of which sent up under section 16 of the Act has absconded and is still at large. Four were fined under sections 5 and 6 and the remaining two are undergoing trial. The fines inflicted were rather light. There should have been more prosecutions but there was no Urban Health Officer for about 8 months and the Conservancy Inspector of the Board had to carry on the duties of the Urban Health Officer in addition to his own duties. It is hoped that with the arrival of the Urban Health Officer the number of prosecutions will increase.
Dibrugarh Municipal Board.	102	102	19	19	19	...	340 0 0	...	Adulterated milk, ghee wheat flour, mustard oil, tea.	340 0 0	Out of 19 prosecutions, 13 convicted, in one case things were destroyed. Four accused could not be traced and one compromised.
North Lakhimpur Town Committee.	...	...	1	1	1	...	5 0 0	...	Selling decomposed fish.	5 0 0	There is no Sanitary Officer in this town. The town Overseer under the direction of the Subdivisional Medical Officer inspect and supervise the sales of fish, vegetables and ripe fruits in the local bazar and decomposed fish are not allowed to be sold in the bazar and in case of any such fish they are destroyed and the responsible persons were prosecuted. The manufacture of arated water, cakes and sweetmeats and tea stalls are periodically inspected and the defects found in manufacturing and sale of these articles are pointed out to the manufacturers or sellers who are then asked to rectify. Sales of milk are periodically tested with lactometer and persons found selling adulterated milk are reported to the Magistrate for trial.

Gauhati Board.	65	65	26	26	12	...	19	0	0	...	Adulteration of food arti- cles.	227	0	0	<p>Out of 65 samples purchased and sent for analysis for the calendar year 1936, twenty-six samples were found adulterated and 39 passed as genuine. Out of 26 prosecutions 12 were convicted with fines ranging from Re. 1 to Rs. 100. Four cases struck off for the accused could not be traced out. Two acquitted for false names given and 8 cases are still pending.</p>
Gauripur Town Com- mittee.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Goalpara Municipal Board.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sibsagar Municipal Board.	5	5	3	3	2	...	20	0	0	...	Adulteration of food articles.	30	0	0	
Hailakandi Town Committee.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dhubri Municipal Board.	27	27	10	9	7	2	49	4	0	100	Adulteration of milk, butter and ghee.	545	0	0	
Barpeta Municipal Board.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tinsukia Town Com- mittee.	4	4	1	1	...	...	...	...	...	...	...	...	...	...

During the year under report, the number of adulterated cases has fallen down from the previous years' figures of 17 to 9. As far as possible effective check was maintained on foodstuff and as a result samples of milk, ghee and butter taken seemed to be less adulterated and conforming to the Government specification standard. The largest distributing area of the foodstuff, is the local municipal market which as a rule was inspected every day during the year by the Health Officer who was assisted by the Town Vaccinator under employ of the Board. All cases found adulterated were prosecuted against.

Sanitary works.

67. This is dealt with in Chapter VI under the heading "Urban Sanitation".

68. There was no meeting of the Public Health Board during 1936. The Health Board (Epidemics) functioned as in previous years.

CHAPTER XV

GENERAL REMARKS

69. Research work in the Province is entrusted to the Assam Medical Research Society. The Society is in receipt of an annual contribution of Rs. 25,000 from the Government of Assam and the Director of Public Health, Assam, is an *ex-officio* Member of the Governing Body. The activities of the Society have been conferred to Malaria, Cholera and Dysentery. As in previous years, the survey of malarious areas was undertaken during the year 1936. Experiment with Cholera and Dysentery Bacteriophage in the Nowgong district and Habiganj subdivision was continued during the year under report.

The various work done by the Society in connection with malaria is enumerated in paragraph 40 of the Report.

70. The subjoined table shows the details of patients treated in the existing Leper Institutions in the Province :—

	Remaining from the previous year	Admissions during the year	Total	Discharged, cured or relieved	Discharged otherwise	Died	Remaining at the end of the year
1	2	3	4	5	6	7	8
Sylhet Leper Asylum	73	27	100	9	12	8	71
Kohima Leper Hospital	20	7	27	...	...	4	23
Leper Ward, Dhubri	10	17	27	10	3	1	13
Leper Asylum, Gauhati	22	26	48	17	7	4	20
Leper Colony, Tura	74	20	94	9	9	7	69

Treatment is available in out-patients clinics at all Sadr and Subdivisional headquarters hospitals and at 210 outlying Public Health Department and Local Board Dispensaries. The Mission leper colony at Jorhat treated 129 lepers during the year.

Famine.

71. No remarks.

72. Assam Births and Deaths Registration Act, which was passed in the year 1935 came into force from 1st January 1936.

Public Health Acts.

73. The Secretary, Assam Red Cross Society, has not yet submitted any scheme for holding Essay and Poster competitions in Public Health.

Public Health Essays.

Bacteriophage.

The Pasteur Institute and Medical Research Institute, Shillong, issued 6,89,320 doses of Bacteriophage during the year under review.

The distribution of Bacteriophage in the prevention of cholera in the Nowgong district and in the Habiganj subdivision of the Sylhet district was continued during the year.

The statistics of mortality from Cholera and Dysentery and Diarrhoea in these two areas during the last five years are shown below :—

	1932		1933		1934		1935		1936	
	Cholera	Dysentery and diarrhoea	Cholera	Dysentery and diarrhoea	Cholera	Dysentery and diarrhoea	Cholera	Dysentery and diarrhoea	Cholera	Dysentery and diarrhoea
1	2	3	4	5	6	7	8	9	10	11
Nowgong	27	250	22	322	22	310	13	364	64	440
Habiganj	493	511	211	625	176	645	662	807	251	739

Plasmoquine and Atebria.

These drugs were tried experimentally in the treatment and prevention of malaria.

74. Lieut.-Colonel T. D. Murison, I. M. S., held charge of the Department throughout the year. During the months of January and February he

Personal Proceedings. inspected *Kala Azar* and Leprosy operations and also vaccination work in the districts of Darrang, Kamrup and Cachar. March to June were spent at headquarters for administrative work. In July, he inspected the Municipality of Gauhati. He was at headquarters in August, September and October in connection with administrative work. In November, he inspected *Kala Azar*, Leprosy, Yaws operations and vaccination work in the Kamrup district. In December he attended the Medical Research Workers' Conference at Calcutta and also inspected *Kala Azar*, Leprosy and Yaws operations and vaccination work in the districts of Goalpara and Darrang.

I held the post of Assistant Director of Public Health, Assam Valley Division, throughout the year. In January I attended the Tuberculosis training class in Calcutta. In February, I inspected the Buragoloi and Ledo Coal mines and also vaccination work in the Lakhimpur district. I also delivered lectures to the students of Berry-White Medical School at Dibrugarh on Hygiene and Vaccination. In March, I inspected the vaccination work and Local Board and Public Health dispensaries in the districts of Kamrup and Goalpara. In April, I inspected Local Board and Public Health dispensaries and vaccination work in the districts of Nowgong and Sibsagar and supervised Cholera campaign in the Nowgong district and also inspected the sanitation of a High English School in the Sibsagar district. In May, the Municipalities of Tezpur and Dhubri and Small Town of Gauripur were inspected and supervised Cholera campaign in Goalpara district. I also investigated the causes of high mortality amongst the lunatics at Tezpur Mental Hospital. In June, I inspected Local Board and Public Health dispensaries in Nowgong and also inspected Barpeta Municipality. July was spent at headquarters. In August, the Dibrugarh Municipality and the Small Towns of Tinsukia, Doom Dooma and North Lakhimpur were inspected. In September, I inspected the anti-malaria centres at Haltugaon and Kachugaon and also Bijni Raj Wards' Estate dispensary. In October, I presided at the examination of Berry-White Medical School and conducted oral examination on Hygiene and Vaccination and also inspected a rice mill. During November and December Local Board and Public Health dispensaries and vaccination work of the districts of Goalpara, Kamrup and Nowgong were inspected. I also inspected the Municipality of Nowgong and anti-malaria centres at Kachugaon and Haltugaon.

Late Dr. P. Gupta, M.B., D.T.M. & H., F. R.F.P.S., D.P.H., held the post of Assistant Director of Public Health, Surma Valley and Hill Division. In January, he inspected anti-malaria and vaccination works and Local Board and Public Health dispensaries and arranged propaganda lecture for Dr. Santra on leprosy in Sylhet and Cachar districts. In February, he inspected leprosy clinics in Maulvibazar and Habiganj subdivisions, visited cholera-affected areas in Sylhet town and also inspected vaccination and *Kala Azar* work in Hailakandi subdivision. In March, he inspected the Dropsy affected areas at Kulaura and inspected vaccination work and Public Health and Local Board dispensaries in the Sylhet district. In April, he conducted examination in Hygiene and Vaccination in the Berry-White Medical School, Dibrugarh. He proceeded on two months' leave from 2nd July 1936 and died on the 9th July 1936. The death of Dr. Gupta has deprived the Department of the services of a zealous and most efficient Officer.

75. My thanks are due to my entire office staff for the very satisfactory and efficient manner in which they performed their duties. I desire, especially to mention my Personal Assistant, Babu Iswar Chandra Das, for the most efficient manner in which he has worked throughout the year.

SHILLONG :

The 9th August 1937. }

S. H. PAUL,

Director of Public Health, Assam.

STATEMENTS

VITAL STATISTICS

IMPERIAL STATEMENT No. I.—*Statement showing the births*

No.	Districts.				Population according to the Census of 1931.			Grand total number of births registered.		
					Male.	Female.	Total.	Male.	Female.	Total.
1	2				3	4	5	6	7	8
SURMA VALLEY										
1	Cachar	...	...	...	284,738	254,073	538,811	10,220	9,641	19,861
2	Sylhet	...	...	...	1,407,645	1,316,697	2,724,342	49,965	46,088	96,053
	Total	...	...	...	1,692,383	1,570,770	3,263,153	60,185	55,729	115,914
ASSAM VALLEY										
3	Goalpara	...	...	...	470,273	412,475	882,748	15,181	13,833	29,014
4	Kamrup	...	...	...	513,345	463,401	976,746	9,839	9,216	19,055
5	Darrang	...	...	...	317,103	267,714	584,817	8,846	8,506	17,352
6	Nowgong	...	...	...	298,585	263,996	562,581	5,249	5,067	10,316
7	Sibsagar	...	...	...	496,288	437,038	933,326	13,164	12,514	25,678
8	Lakhimpur	...	...	...	399,108	325,474	724,582	11,375	11,000	22,375
	Total	...	...	...	2,494,702	2,170,098	4,664,800	63,654	60,136	1,23,790
	Total for the province	...	...	...	4,187,085	3,740,868	7,927,953	1,23,839	1,15,865	2,39,704

IMPERIAL STATEMENT No. II.—*Statement showing the deaths*

No.	Districts.							Area, in square miles.	Average population per square mile.	Number of deaths registered		
										Male.	Female.	Total.
1	2							3	4	5	6	7
SURMA VALLEY												
1	Cachar	...	...	...	...	...	...	1,972	273	5,981	5,877	11,858
2	Sylhet	...	...	...	...	...	...	5,478	497	31,535	28,617	59,552
	Total							...	...	...	...	...
ASSAM VALLEY												
3	Goalpara	...	...	...	...	...	...	3,985	222	10,923	9,363	20,286
4	Kamrup	...	...	...	...	...	...	3,844	254	6,013	5,306	11,319
5	Darrang	...	...	...	...	...	...	2,842	206	6,161	5,922	12,083
6	Nowgong	...	...	...	...	...	...	3,896	144	3,488	3,018	6,506
7	Sibsagar	...	...	...	...	...	...	5,131	182	9,089	8,623	17,712
8	Lakhimpur	...	...	...	...	...	...	4,234	171	8,308	7,977	16,285
	Total							...	...	...	...	...
	Total for the province							...	...	...	...	...
								31,382	253	81,498	74,103	155,601

registered in the districts of Assam during the year 1936.

Ratio of births per 1,000 of population.			Number of males born to every 100 females born	Mean ratio of births per 1,000 during the previous five years.		
Male.	Female.	Total.		Male.	Female.	Total.
9	10	11	12	13	14	15
18.97	17.89	36.86	106	17.02	16.22	33.24
18.34	16.92	35.26	108	18.14	16.85	34.99
18.44	17.08	35.52	108	17.96	16.74	34.70
17.20	15.67	32.87	110	16.55	15.60	32.15
10.07	9.44	19.51	107	11.27	10.55	21.82
15.13	14.54	29.67	104	14.99	14.28	29.27
9.33	9.01	18.34	104	10.24	9.52	19.76
14.10	13.41	27.51	105	14.60	13.55	28.15
15.70	15.18	30.88	103	14.48	13.90	28.38
13.65	12.89	26.54	106	13.78	12.97	26.75
15.62	14.61	30.24	107	15.50	14.52	30.02

registered in the districts of Assam during the year 1936.

Deaths per 1,000 of population from—											Mean ratio of deaths per 1,000 during the previous five years		
Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	All causes.			Male.	Female.	Total.
								Male.	Female.	Total.			
8	9	10	11	12	13	14	15	16	17	18	19	20	21
.86	.03	...	10.77	1.91	1.57	.29	6.57	21.01	23.13	22.01	21.01	22.93	21.91
.75	.17	...	12.39	1.11	.52	.32	6.59	22.40	21.28	21.86	22.66	21.78	22.24
.77	.14	...	12.13	1.25	.70	.31	6.59	22.17	21.58	21.88	22.39	21.97	22.18
.08	.003	...	21.78	.26	.16	.19	.50	23.25	22.70	22.98	24.23	22.89	23.60
.81	.40	...	8.60	.36	.23	.17	1.53	11.71	11.45	11.59	14.31	14.61	14.45
.53	.07	...	13.60	2.09	.88	.23	3.21	19.43	22.12	20.66	19.47	21.98	20.62
.11	.07	...	9.12	.78	.31	.17	1.01	11.68	11.43	11.56	12.73	13.25	12.97
.40	.02	...	10.19	2.97	1.36	.23	3.79	18.31	19.73	18.98	17.10	18.26	17.65
.21	.004	...	10.27	2.81	2.53	.33	6.31	20.82	24.51	22.48	17.85	20.58	19.08
.28	.11	...	12.36	1.51	.89	.22	2.68	17.63	18.53	18.05	17.77	18.56	18.13
.48	.12	...	12.27	1.40	.81	.26	4.29	19.46	19.81	19.63	19.63	19.99	19.80

IMPERIAL STATEMENT NO. III.—Deaths registered

No.	Districts	Population according to the census of 1931	January	February	March	April	
1	2	3	4	5	6	7	
1	Cachar ... {	Urban ...	16,195	25	14	28	29
		Rural ...	5,22,616	1,274	904	760	848
		Total ...	5,38,811	1,299	918	788	877
	2	Sylhet ... {	Urban ...	45,883	81	63	52	51
Rural ...			26,78,459	6,524	5,113	3,816	3,863
Total ...			27,24,342	6,605	5,176	3,868	3,914
3	Goalpara... {	Urban ...	21,442	30	19	25	24
		Rural ...	861,306	1,797	1,417	1,504	1,798
		Total ...	882,748	1,827	1,436	1,529	1,822
4	Kamrup ... {	Urban ...	39,028	82	77	65	61
		Rural ...	937,718	920	617	787	840
		Total ...	976,746	1,002	694	852	901
5	Darrang ... {	Urban ...	11,964	18	18	11	14
		Rural ...	572,853	971	677	589	990
		Total ...	584,817	989	695	600	1,004
6	Nowgong... {	Urban ...	10,413	18	18	9	10
		Rural ...	552,168	497	372	473	572
		Total ...	562,581	515	390	482	582
7	Sibsagar ... {	Urban ...	23,175	35	25	24	23
		Rural ...	910,151	1,198	932	872	1,254
		Total ...	933,326	1,233	957	896	1,277
8	Lakhimpur {	Urban ...	27,914	41	37	24	40
		Rural ...	696,668	1,002	903	866	987
		Total ...	724,582	1,043	940	890	1,027
	Total for rural circles ...	7,731,939	14,183	10,935	9,667	11,152	
	Ratio per mille of population	...	1·80	1·48	1·23	1·46	
	Total for the town ...	196,014	330	271	238	252	
	Ratio per mille for towns	...	1·65	1·45	1·19	1·30	
	Total for the province ...	7,927,953	14,513	11,206	9,905	11,404	
	Ratio per mille for the province.	...	1·80	1·48	1·23	1·46	

Ratios have been calculated with reference to number of days in each month. This table includes

in the districts of Assam during each month of the year, 1936

May	June	July	August	September	October	November	December	Total deaths registered during the year 1936
8	9	10	11	12	13	14	15	16
25	26	21	20	25	22	21	36	292
867	985	886	823	948	926	992	1,353	11,566
892	1,011	907	843	973	948	1,013	1,389	11,858
79	76	61	55	82	46	113	64	823
4,524	4,535	4,199	4,070	4,570	5,113	5,598	6,804	58,729
4,603	4,611	4,260	4,125	4,652	5,159	5,711	6,868	59,552
28	30	30	27	31	21	39	28	332
1,700	1,947	1,620	1,693	1,474	1,477	1,672	1,855	19,954
1,728	1,977	1,650	1,720	1,505	1,498	1,711	1,883	20,286
49	88	64	66	65	37	67	50	771
1,167	1,122	1,059	858	849	687	802	840	10,548
1,216	1,210	1,123	924	914	724	869	890	11,319
29	35	13	31	23	22	42	19	275
1,308	1,455	1,157	929	835	973	908	1,016	11,808
1,337	1,490	1,170	960	858	995	950	1,035	12,083
14	24	24	19	18	13	15	17	199
635	603	656	469	505	550	464	511	6,307
649	627	680	488	523	563	479	528	6,506
43	44	39	39	28	35	46	34	415
1,660	1,797	2,009	1,678	1,445	1,649	1,558	1,245	17,297
1,703	1,841	2,048	1,717	1,473	1,684	1,604	1,279	17,712
40	43	46	38	52	41	68	46	516
1,207	1,593	1,591	1,573	1,573	1,653	1,470	1,351	15,769
1,247	1,636	1,637	1,611	1,625	1,694	1,538	1,397	16,285
13,063	14,037	13,177	12,093	12,199	13,028	13,464	14,975	1,51,978
1·66	1·84	1·67	1·53	1·60	1·65	1·77	1·90	19·66
307	366	298	295	324	237	411	294	3,623
1·54	1·89	1·49	1·47	1·67	1·19	2·13	1·47	18·48
13,375	14,403	13,475	12,388	12,523	13,265	13,875	15,269	155,601
1·66	1·84	1·67	1·53	1·60	1·64	1·77	1·89	19·63

municipalities and small towns in which registration of vital statistics is compulsory.

IMPERIAL STATEMENT No. IV.—Deaths registered according to

No.	A.—Rural circles	Under 1 year															Total			1 and under 5 years	
		Not exceeding 1 month						Total	Over 1 month and not exceeding 6 months			Over 6 months and not exceeding 12 months									
		Male			Female				Male	Female	Total	Male	Female	Total							
		Under one week	Over one week	Total	Under one week	Over one week	Total														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
1	Cachar ...	442	432	874	365	327	692	1,566	364	332	696	232	204	436	1,470	1,228	2,698	802	740		
2	Sylhet ...	2,583	1,987	4,570	2,358	1,551	3,909	8,779	1,920	1,530	3,450	1,358	1,088	2,446	8,148	6,527	14,675	4,274	4,118		
3	Goalpara ...	790	539	1,329	503	532	1,035	2,364	1,027	940	1,967	460	412	872	2,816	2,387	5,203	1,420	1,340		
4	Kamrup ...	347	310	657	313	271	584	1,241	496	439	935	169	182	351	1,322	1,205	2,527	1,107	1,037		
5	Darrang ...	198	248	446	167	217	384	830	609	577	1,186	303	311	614	1,358	1,272	2,630	1,124	1,059		
6	Nowgong ...	120	184	304	93	154	247	551	278	247	525	139	145	284	721	639	1,360	539	512		
7	Sibsagar ...	401	393	794	328	294	622	1,416	646	538	1,184	383	336	719	1,823	1,496	3,319	1,739	1,725		
8	Lakhimpur ...	299	415	714	257	334	591	1,305	507	491	998	290	315	605	1,511	1,397	2,908	1,600	1,573		
	Total for rural circles.	5,480	4,508	9,988	4,384	3,680	8,064	18,052	5,847	5,094	10,941	3,334	2,993	6,327	19,169	16,151	35,320	12,605	12,104		
	Ratio per mille	...	...	...	...	...	...	...	...	...	...	...	...	...	158.98	143.21	151.36	...	...
	B.—TOWNS.																				
	Surma Valley.																				
1	Silchar ...	4	6	10	1	4	5	15	9	8	17	8	3	11	27	16	43	14	13		
2	Hailakandi ...	1	1	2	3	...	3	5	3	...	3	...	...	...	5	3	8	4	2
3	Hailong ...	2	...	2	...	2	2	4	...	...	...	...	...	...	2	2	4	1	1
4	Sylhet ...	16	3	19	14	6	20	39	21	18	39	10	14	24	50	52	102	18	29		
5	Maulvibazar...	3	3	6	...	1	1	7	4	...	4	1	1	2	11	2	13	7	8		
6	Karimganj ...	10	4	14	1	1	2	16	4	4	8	2	3	5	20	9	29	6	4		
7	Habiganj ...	9	8	17	9	6	15	32	8	4	12	2	3	5	27	22	49	10	10		
8	Sunamganj ...	4	2	6	4	...	4	10	2	5	7	4	3	7	12	12	24	7	6		
9	Sreemangal ...	...	1	1	...	...	...	1	...	...	...	...	1	1	1	1	2	...	...
	Assam Valley.																				
1	Dhubri ...	14	...	14	10	4	14	28	3	6	9	3	1	4	20	21	41	11	10		
2	Goalpara ...	4	4	8	1	3	4	12	2	2	4	3	2	5	13	8	21	5	5		
3	Gauripur ...	8	1	9	3	1	4	13	4	1	5	1	1	2	14	6	20	4	4		
4	Gauhati ...	20	8	28	15	14	29	57	18	16	34	7	10	17	53	55	108	26	22		
5	Barpeta ...	14	10	24	7	12	19	43	17	10	27	9	6	15	50	35	85	21	25		
6	Palasbari ...	1	3	4	...	4	4	8	4	5	9	2	1	3	10	10	20	6	6		
7	Tezpur ...	9	6	15	7	5	12	27	2	3	5	3	2	5	20	17	37	...	10		
8	Mangaldai ...	...	1	1	1	3	4	5	...	2	2	1	...	1	2	6	8	3	2	
9	Nowgong ...	3	...	3	7	2	9	12	16	8	24	9	3	12	28	20	48	12	8		
10	Jorhat ...	8	5	13	5	2	7	20	7	4	11	4	4	8	24	15	39	4	4		
11	Sibsagar ...	6	2	8	5	...	5	13	2	1	3	1	...	1	11	6	17	3	4		
12	Nazira ...	8	3	11	3	1	4	15	3	4	7	3	1	4	17	9	26	3	8		
13	Golaghat ...	6	...	6	3	1	4	10	2	1	3	...	...	...	8	5	13	3	2
14	Dibrugarh ...	7	8	15	10	6	16	31	7	3	10	2	4	6	24	23	47	17	20		
15	Tinsukia ...	3	1	4	4	2	6	10	1	1	2	1	3	4	6	10	16	5	8		
16	Doom Dooma ...	1	...	1	...	...	...	1	...	...	...	...	...	...	1	...	1	1	...
17	North Lakhimpur.	1	3	4	4	...	4	8	1	2	3	...	...	...	5	6	11	...	2
	Total for towns	162	13	245	117	80	197	442	140	108	248	76	66	142	461	371	832	191	213		
	Ratio per mille	...	...	...	...	...	...	...	...	...	...	...	...	...	141.37	120.14	131.04	...	...
	Total for the province.	5,642	4,591	10,233	4,501	3,760	8,261	18,494	5,987	5,202	11,189	3,410	3,059	6,469	19,630	16,522	36,152	12,796	12,317		
	Ratio per mille of population.	...	...	...	...	...	...	...	...	...	...	...	...	...	158.51	142.59	150.82	59.23	78.11

STATEMENT No. IV(a).—showing

Districts.				Christians.		Hindus.	
				Number.	Ratio per 1,000 births.	Number.	Ratio per 1,000 births.
Cachar ...	...	...	...	4	.20	1,511	76.08
Sylhet ...	...	...	...	2	.002	5,738	59.74
Goalpara ...	...	...	...	93	3.21	2,248	77.48
Kamrup ...	...	...	...	42	2.20	2,074	108.84
Darrang ...	...	...	...	123	7.09	1,922	110.77
Nowgong ...	...	...	...	28	2.71	971	94.13
Sibsagar ...	...	...	...	9	.35	3,004	116.99
Lakhimpur	...	...	...	105	4.69	2,580	115.31
Total	...	...	...	406	1.69	20,048	83.64

Separate figures for Indian

age in the districts of (rural circles) and towns of Assam during the year 1936.

5 and under 10 years		10 and under 15 years		15 and under 20 years		20 and under 30 years		30 and under 40 years		40 and under 50 years		50 and under 60 years		60 and up- wards		Total (all age groups)	
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
404	325	236	158	186	310	451	929	481	618	439	346	463	325	887	768	5,819	5,741
1,745	1,531	979	756	1,143	1,597	2,460	3,581	2,648	2,461	2,647	1,856	2,620	1,881	4,434	3,823	31,048	27,631
854	763	533	396	442	612	936	1,121	983	845	990	596	863	530	885	642	10,722	9,232
463	411	232	146	177	229	381	540	444	398	493	293	445	319	534	367	5,598	4,950
459	446	296	293	288	420	468	687	575	584	494	410	470	348	435	292	5,997	5,811
270	234	135	105	121	154	258	332	299	263	320	263	319	210	377	231	3,359	2,948
769	729	424	288	346	443	611	1,034	718	895	662	533	756	537	1,008	761	8,856	8,441
682	545	292	264	229	374	558	1,164	801	807	777	475	692	464	370	724	7,982	7,787
5,676	4,984	3,127	2,406	2,932	4,139	6,123	9,383	6,949	6,871	6,822	4,782	6,598	4,614	9,440	7,108	79,431	72,547
...
4	5	1	...	3	11	13	18	6	9	16	2	13	6	12	13	109	93
2	...	...	...	1	1	3	2	3	...	4	...	4	1	2	8	28	17
3	1	...	1	1	1	3	4	6	4	2	3	1	2	6	1	25	20
5	6	2	8	6	10	17	26	13	16	20	7	13	7	32	37	176	198
8	5	2	...	...	5	...	2	1	...	1	...	...	1	3	4	31	28
2	1	4	...	1	2	5	10	11	5	6	...	5	5	9	6	69	42
2	3	2	...	3	1	5	8	11	6	12	2	13	6	16	4	101	63
2	2	3	2	1	5	7	8	8	3	4	5	3	1	5	7	52	51
1	...	...	...	...	...	1	1	1	...	1	...	1	...	...	2	6	4
2	3	5	1	4	7	18	6	11	5	10	4	10	2	8	3	99	62
2	2	1	...	4	7	7	4	1	3	3	2	6	2	5	2	47	35
4	3	3	1	1	2	3	4	7	2	5	2	5	3	9	7	55	34
11	13	7	9	5	15	20	18	24	17	19	11	22	11	16	14	203	185
8	6	10	5	5	10	12	11	18	13	13	4	14	8	31	22	182	139
...	3	1	...	1	1	2	2	4	1	1	1	1	2	4	6	30	32
5	4	4	1	7	6	30	24	30	8	28	11	6	4	18	11	148	96
...	1	2	0	2	3	3	1	2	...	...	...	1	1	1	1	16	15
5	2	3	...	2	4	13	9	24	7	18	5	9	7	15	8	129	70
3	2	2	8	2	4	10	8	12	7	7	3	6	5	17	1	90	57
2	...	4	4	3	3	1	7	2	6	3	3	6	3	12	3	4	39
3	3	...	1	3	2	3	3	3	4	4	...	3	5	2	2	41	37
6	5	...	3	1	3	5	14	8	6	14	4	8	2	2	5	55	49
2	5	12	8	18	11	45	26	44	10	34	10	42	8	33	8	271	129
1	2	7	1	...	1	9	3	1	5	1	1	2	3	3	5	35	39
1	...	...	...	...	...	...	1	...	1	1	...	2	...	...	...	6	2
...	2	...	...	...	1	...	5	2	2	3	...	1	1	3	1	14	20
84	79	75	54	74	116	235	225	253	140	230	81	200	96	264	181	2,067	1,556
...
5,760	5,063	3,202	2,460	3,006	4,255	6,358	9,613	7,202	7,011	7,052	4,863	6,798	4,710	9,694	7,289	81,498	74,103
14.52	18.19	5.12	5.21	4.04	5.91	18.41	25.23	14.96	16.41	12.45	9.53	12.55	8.47	73.41	54.97	19.46	19.81

mortality under one year by classes.

Muhammadans.		Buddhists.		Other classes.	
Number.	Ratio per 1,000 births.	Number.	Ratio per 1,000 births.	Number.	Ratio per 1,000 births.
12,16	61.23	...	...	22	1.11
9,110	94.84	...	...	44	.46
2,182	75.21	...	...	762	26.22
421	22.09	8	.42	195	10.23
218	12.56	4	.23	408	23.51
266	25.78	1	.09	142	13.77
79	3.08	...	...	322	12.54
93	4.16	5	.22	200	8.94
13,585	56.67	18	.08	2,095	8.74

Christians are not available,

IMPERIAL STATEMENT No. V.—Deaths registered according

No.	Districts.	Number of deaths registered											
		Christians.			Hindus.			Muhammadans.			Buddhists.		
		Male	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	SURMA VALLEY.												
1	Cachar	19	23	42	3,555	3,478	7,033	2,299	2,262	4,561	...	...	...
2	Sylhet	6	6	12	12,308	11,623	23,931	19,106	16,860	35,966	...	...	...
	Total	25	29	54	15,863	14,501	30,364	21,405	19,122	40,527	...	...	...
	ASSAM VALLEY.												
3	Goalpara	202	210	412	4,493	3,765	8,258	4,743	4,111	8,854	10	2	12
4	Kamrup	45	37	82	4,534	4,003	8,537	1,026	901	1,927	...	...	...
5	Darrang	207	229	436	4,484	4,235	8,719	522	534	1,056	10	5	15
6	Nowgong	43	38	81	2,208	1,947	4,155	779	611	1,390	...	...	...
7	Sibsagar	71	89	160	7,690	7,241	14,934	289	279	568	29	35	64
8	Lakhimpur	200	223	423	7,329	7,042	14,371	199	149	348	20	17	37
	Total	768	826	1,594	30,738	28,236	58,974	7,558	6,585	14,143	69	59	128
	Total for the Province	793	855	1,648	46,601	42,737	89,338	28,963	25,707	54,670	69	59	128

to class in the districts of Assam during the year 1936.

Other classes.			Rates of deaths per 1,000 of population														
			Christians.			Hindus.			Muhammadans.			Buddhist.			Other classes.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
108	114	222	12.99	18.64	15.58	20.08	22.06	21.01	22.23	24.47	23.28	...	...	...	38.99	41.96	40.46
115	128	243	3.64	4.49	4.02	21.38	20.50	20.95	23.07	21.74	22.43	...	...	...	52.68	67.26	59.47
223	242	465	8.03	11.29	9.51	21.08	20.85	20.97	22.98	22.03	22.52	...	...	...	45.02	52.38	48.57
1,475	1,275	2,750	20.62	24.03	22.23	21.56	21.21	21.33	23.09	22.55	22.84	32.68	7.24	20.62	31.78	29.24	30.55
408	365	773	13.83	14.52	14.69	12.23	11.79	12.02	7.96	8.06	8.02	...	...	...	39.73	37.68	38.74
938	919	1,857	24.49	31.53	27.74	18.19	20.25	19.13	13.91	17.82	15.64	12.42	13.12	12.64	39.46	43.79	41.49
458	422	880	16.44	15.65	16.06	12.79	12.72	12.76	8.15	7.44	7.82	...	...	...	16.55	16.02	16.29
1,010	976	1,986	9.93	14.64	12.09	17.25	18.32	17.76	11.60	14.69	12.93	19.94	30.20	24.49	59.08	63.25	61.06
560	546	1,106	23.93	34.27	28.46	20.31	23.41	21.72	11.34	17.72	13.41	6.29	6.90	6.55	60.51	76.37	67.42
4849	4,503	9,352	19.49	24.61	21.84	17.03	17.92	17.45	14.83	15.19	14.99	10.87	13.10	11.80	36.08	36.51	36.29
5,072	4,745	9,817	18.65	23.66	20.95	18.22	18.82	18.50	20.09	19.75	19.93	10.76	13.01	11.69	36.40	37.09	36.73

IMPERIAL STATEMENT No. VI.—Deaths registered from different

1	2	3	4			5	6	7	8	9	10	
No.	Districts and towns.	Population according to the Census of 1931.	Births.			Birth-rate.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.
			Male.	Female.	Total.							
DISTRICTS EXCLUDING TOWNS.												
SURMA VALLEY.												
1	Cachar	522,616	9,990	9,415	19,405	37·13	455	14	...	5,754	987	796
2	Sylhet	2,678,459	49,195	45,379	94,574	35·31	2,200	452	...	33,550	2,951	1,366
	Total	3,201,075	59,185	54,794	113,979	35·61	2,475	466	...	39,304	3,938	2,162
ASSAM VALLEY.												
3	Goalpara	861,306	14,834	13,533	28,367	32·93	72	3	...	19,125	194	104
4	Kamrup	937,718	8,989	8,369	17,358	18·51	290	326	...	8,154	284	146
5	Darrang	572,853	8,679	8,334	17,013	29·70	333	42	...	7,908	1,161	463
6	Nowgong	552,168	5,063	4,892	9,955	18·03	62	37	...	5,092	412	144
7	Sibsagar	910,151	12,796	12,167	24,963	27·43	375	22	...	9,349	2,712	1,230
8	Lakhimpur	696,668	11,032	10,638	21,720	31·18	154	3	...	7,329	1,957	1,735
	Total	4,530,864	61,393	57,983	119,376	26·35	1,291	433	...	56,957	6,720	3,622
	Total of districts excluding towns.	7,731,939	120,578	112,777	233,355	30·18	3,766	899	...	96,261	10,658	5,984
TOWNS.												
SURMA VALLEY.												
1	Silchar	13,069	172	175	347	26·55	8	...	...	24	86	45
2	Hailakandi	2,002	44	33	77	38·46	1	...	...	11	5	...
3	Hailong	1,124	14	18	32	28·47	...	...	...	13	2	7
4	Sylhet	21,435	320	337	657	30·65	8	...	...	106	35	33
5	Maulvi Bazar	4,314	70	47	117	27·12	4	...	...	16	13	...
6	Karimganj	5,691	98	89	187	32·86	1	...	...	11	18	9
7	Habiganj	7,577	134	125	259	34·13	5	...	...	32	13	13
8	Sunamganj	5,326	123	93	216	40·55	9	...	...	41	7	3
	Sreemangal	1,540	25	18	43	27·92	...	...	...	8	...	...
	Total	62,078	1,000	935	1,935	31·17	36	...	...	262	129	11 0

causes in the districts and towns of the province of Assam during the year 1936.

11						12	13	14											15
Injuries.						All other causes.	Total.	Ratio of deaths per 1,000 of population.											No.
Suicide.		Wounds or accidents.	Snakes and wild animals.	Rabies.	Total.			Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.			
Male.	Female.															For the year.	Mean of previous five years.		
15	5	109	14	1	144	3,416	11,566	·87	·02	...	11·01	1·89	1·52	·28	6·54	22·13	22·18	1	
36	17	725	51	7	836	17,554	58,729	·75	·17	...	12·53	1·10	·51	·31	6·55	21·93	22·34	2	
51	22	834	65	8	980	20,970	70,295	·77	·15	...	12·28	1·23	·68	·30	6·55	21·96	22·31		
17	14	80	51	...	162	294	19,954	·08	·003	...	22·20	·23	·12	·20	·34	23·17	23·78	3	
23	18	76	36	2	155	1,193	10,548	·31	·35	...	8·70	·30	·16	·17	1·27	11·25	14·15	4	
11	8	67	34	3	123	1,773	11,808	·59	·07	...	13·80	2·02	·81	·21	3·09	20·61	20·57	5	
6	5	51	16	5	83	477	6,307	·11	·07	...	9·22	·75	·26	·15	·86	11·42	12·82	6	
28	9	129	28	13	207	3,402	17,297	·41	·02	...	10·27	2·98	1·35	·22	3·74	19·00	17·70	7	
20	4	161	15	10	210	4,381	15,769	·22	·004	...	10·52	2·81	2·49	·30	6·29	22·63	19·19	8	
105	58	564	180	33	940	11,520	81,683	·28	·10	...	12·57	1·48	·84	·21	2·54	18·03	18·12		
156	80	1,398	245	41	1,920	32,490	151,978	·49	·12	...	12·45	1·38	·77	·25	4·20	19·66	19·86		
...	...	9	...	...	9	80	202	·61	...	...	1·84	2·75	3·44	·69	6·12	15·46	11·78	1
...	...	1	...	1	2	26	45	·49	...	...	5·49	2·50	...	1·00	12·99	22·48	18·48	2
...	...	3	...	...	3	20	45	...	...	...	11·57	1·78	6·23	2·67	17·79	40·04	20·46	3
...	...	2	...	...	2	190	374	·37	...	...	4·95	1·63	1·54	·09	8·86	17·45	14·37	4
...	...	...	...	...	...	28	61	·93	...	...	3·71	3·01	...	...	6·49	14·14	13·67	5
...	...	6	...	1	7	65	111	·18	...	...	1·93	3·16	1·58	1·23	11·42	19·50	17·39	6
...	...	12	...	3	15	86	164	·66	...	...	4·22	1·72	1·72	1·97	11·35	21·64	19·01	7
...	...	4	...	...	4	39	103	1·69	...	...	7·70	1·31	·56	·75	7·32	19·34	19·71	8
...	...	...	...	...	...	2	10	...	...	...	5·19	...	...	...	1·30	6·49	...	9
...	...	37	...	5	42	536	1,115	·58	...	...	4·22	2·08	1·77	·68	8·63	17·96	15·33	

IMPERIAL STATEMENT No. VI.—Deaths registered from different causes

1	2	3	4			5	6	7	8	9	10	
No.	Districts and towns.	Population according to the Census of 1931.	Births.			Birth-rate.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.
			Male.	Female.	Total.							
TOWNS—concl'd. ASSAM VALLEY.												
10	Dhubri	9,435	147	136	283	29.99	1	..	..	23	26	17
11	Goalpara	6,415	119	84	203	31.64	...	..	..	41	7	8
12	Gauripur	5,592	81	80	161	28.79	2	..	..	36	2	9
13	Gauhati	21,797	350	345	695	31.83	5	53	..	81	34	23
14	Barpeta	13,777	431	429	860	62.42	2	4	..	142	24	44
15	Palasbari	3,454	69	73	142	41.11	1	5	..	26	7	7
16	Tezpur	10,268	146	140	286	27.85	1	1	...	29	57	50
17	Mangaldai	1,696	21	32	53	31.25	...	...	..	15	4	2
18	Nowgong	10,413	186	175	361	34.67	2	..	...	39	28	30
19	Jorhat	8,334	142	128	270	32.40	...	...	...	38	17	17
20	Sibsagar	6,669	109	102	211	31.63	...	...	...	41	21	7
21	Nazira... ..	3,484	54	49	103	29.56	...	...	...	45	15	4
22	Golaghat	4,688	63	68	131	27.94	...	1	...	42	5	15
23	Dibrugarh	18,734	214	205	419	22.36	...	...	...	60	71	92
24	Tinsukia	6,160	83	61	144	27.91	...	...	...	40	7	4
25	Doom Dooma	1,900	6	3	9	4.74	...	...	...	7	...	...
26	North Lakhimpur	2,120	40	43	83	39.15	...	...	...	7	1	2
Total		133,936	2,261	2,153	4,414	32.96	14	64	...	717	326	331
Total for the towns...		196,014	3,261	3,088	6,349	32.39	50	64	...	979	455	441
Total for the Province...		7,927,953	123,839	115,865	239,704	30.24	3,816	963	...	97,240	11,113	6,425

This table includes municipalities and small towns in which

Supplementary (optional) Statement

Towns.	1		2		3		4		5		6		7	
	Malaria.		Enteric fever.		Measles.		Relapsing fever.		Kala azar.		Influenza.		Other fevers.	
	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
Silchar ...	6	..	2	..	1	..	..	..	..	..	..	..	15	..
Sylhet ...	..	..	2	..	3	..	..	..	2	..	..	..	99	..
Habiganj ...	24	..	2	..	4	..	..	..	..	..	..	..	2	..
Karimganj ...	3	..	3	..	..	..	..	..	..	..	..	..	5	..
Gauhati ...	12	..	5	..	10	..	..	..	2	..	..	..	52	..
Barpeta ...	5	..	13	..	2	..	4	..	3	..	..	..	115	..
Dhubri ...	14	..	3	..	..	..	..	..	7	..	..	..	4	..
Goalpara ...	9	..	..	..	1	..	..	..	..	..	..	..	31	..
Tezpur ...	12	..	4	..	..	..	..	..	2	..	..	..	11	..
Nowgong ...	28	..	5	..	..	..	..	..	1	..	..	..	5	..
Jorhat ...	4	..	2	..	..	..	..	..	3	..	3	..	26	..
Dibrugarh ...	9	..	11	..	..	..	..	..	..	..	..	..	40	..
Shillong ...	13	..	9	..	1	..	..	..	..	..	..	..	23	..

This table includes municipalities and small towns in which

in the districts and towns of the province of Assam during the year 1936—concluded.

11		12	13	14														15
Injuries.							Ratio of deaths per 1,000 of population.											
Suicide.		Wounds and accidents.	Snakes and wild animals.	Rabies.	Total.	All other causes.	Total.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		Number.
Male.	Female.															For the year.	Mean of previous five years.	
	1	5	...	...	7	82	161	·11	...	...	2·96	2·76	1·80	·74	8·69	17·06	17·59	10
...	1	1	...	...	2	24	82	...	...	...	6·39	1·09	1·24	·31	3·74	12·78	14·03	11
...	...	1	1	...	2	38	89	·35	...	...	6·44	·36	1·61	·36	6·80	15·91	16·81	12
...	...	1	...	...	1	191	388	·23	2·43	...	3·71	1·56	1·06	·05	8·76	17·80	19·22	13
1	...	7	...	...	8	97	321	·15	·29	...	10·31	1·74	3·19	·58	7·04	23·29	25·18	14
...	...	...	1	...	1	15	62	·29	1·45	...	7·53	2·03	2·03	·29	4·34	17·95	22·29	15
...	2	8	...	...	10	96	244	·10	·10	...	2·83	5·55	4·87	·97	9·35	23·76	23·86	16
...	...	...	1	1	2	8	31	...	...	...	8·84	2·36	1·18	1·18	4·72	18·28	18·87	17
...	...	10	...	...	10	90	199	·19	...	...	3·74	2·69	2·88	·96	8·64	19·11	21·03	18
...	...	3	...	...	3	72	147	...	...	...	4·56	2·04	2·04	·36	8·64	17·64	17·16	19
...	...	...	...	...	...	17	86	...	...	...	6·15	3·15	1·05	...	2·55	12·90	12·15	20
...	...	...	...	...	...	14	78	...	...	...	12·92	4·31	1·15	...	4·02	22·39	12·66	21
...	1	1	...	...	2	39	104	...	·21	...	8·96	1·07	3·19	·43	8·32	22·18	19·62	22
1	...	26	1	2	30	147	400	...	...	...	3·20	3·79	4·91	1·60	7·85	21·35	18·25	23
...	...	...	...	2	2	21	74	...	...	...	7·75	1·36	·78	·39	4·07	14·34	9·50	24
...	...	...	...	...	...	1	8	...	...	...	3·68	...	...	...	·53	4·21	11·05	25
...	...	...	...	...	...	24	54	...	...	...	3·30	·47	·94	...	11·32	16·04	21·69	26
3	5	63	4	5	80	976	2,508	·10	·48	...	5·35	2·43	2·47	·60	7·29	18·73	18·71	
3	5	100	4	10	122	1,512	3,621	·25	·33	...	4·99	2·82	2·25	·62	7·71	18·48	17·66	
159	85	1,498	249	51	2,042	34,902	155,601	·48	·12	...	12·27	1·40	·81	·26	4·29	19·63	19·80	

registration of vital statistics is compulsory.

VI(a) for the year 1936.

8		9		10		11		12		13	Deaths under one year.			Infant mortality rate.
Dysentery.		Diarrhœa.		Pneumonia.		Phthisis.		Other respiratory diseases.		Deaths from child-birth.				
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.	
27	...	9	...	26	...	...	...	19	...	14	27	16	43	123·92
29	...	6	...	12	...	7	...	14	...	12	50	52	102	155·25
7	...	6	...	4	...	4	...	5	...	4	27	22	49	189·19
12	...	6	...	4	...	1	...	4	...	5	20	9	29	155·08
25	...	9	...	12	...	7	...	4	...	9	53	55	108	155·39
18	...	6	...	37	...	3	...	4	...	7	50	35	85	98·84
21	...	5	...	8	...	5	...	4	...	2	20	21	41	144·87
7	7	...	...	...	1	...	5	13	8	21	103·44
43	...	14	...	22	...	20	...	8	...	11	20	17	37	129·37
22	...	6	...	17	...	2	...	11	...	4	23	20	48	132·96
14	...	3	...	13	...	4	...	...	...	1	24	15	39	144·44
55	...	16	...	33	...	22	...	37	...	12	24	23	47	112·17
11	...	9	...	35	...	16	...	27	...	13	28	21	49	68·53

registration of vital statistics is compulsory.

IMPERIAL STATEMENT No. VII.—Deaths registered from Cholera in the

Number.	Districts.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.					
1	2	3	4	5	6	7	8	9	10	11
	SURMA VALLEY.									
1	Cachar	13	11	1,607	265	55	8	...	8	21
2	Sylhet	41	39	11,717	704	215	80	37	40	115
	Total	54	40	13,324	969	270	88	37	48	136
	ASSAM VALLEY.									
3	Goalpara	18	15	3,188	75	18	5	5	10	28
4	Kamrup	16	13	2,738	73	14	12	28	42	70
5	Darrang	14	12	1,978	130	61	3	1	55	114
6	Nowgong	12	8	2,323	64	...	...	3	20	17
7	Sibsagar	17	11	2,284	112	...	...	...	7	67
8	Lakhimpur	17	4	2,498	9	3	2	5	1	9
	Total	94	63	15,009	463	96	22	42	135	305
	Total for the Province	148	103	28,333	1,432	366	110	79	183	441

IMPERIAL STATEMENT No. VIII.—Deaths registered from

Number.	Districts.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from small-pox were reported.	Number in each district.	Number from which deaths from small-pox were reported.							
1	2	3	4	5	6	7	8	9	10	11	12	13
	SURMA VALLEY.											
1	Cachar	13	3	1,607	19	...	...	...	...	...	...	4
2	Sylhet	41	18	11,717	166	19	16	21	42	56	54	40
	Total	54	21	13,324	185	19	16	21	42	56	54	44
	ASSAM VALLEY.											
3	Goalpara	18	2	3,188	3	...	...	...	...	3	...	...
4	Kamrup	16	13	2,738	34	51	57	67	51	55	37	23
5	Darrang	14	9	1,978	31	1	18	2	6	7	2	2
6	Nowgong	12	7	2,323	37	10	2	4	...	1	...	...
7	Sibsagar	17	7	2,284	32	2	...	...	5	4	2	8
8	Lakhimpur	17	1	2,498	2	...	1	...	1	..	...	...
	Total	94	39	15,009	139	64	78	73	63	70	41	33
	Total for the Province	148	60	28,333	324	83	94	94	105	126	95	77

districts of Assam during each month of the year 1936.

June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	Number.
							Male.	Female.	Total.	Male.	Female.	Total.		
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
31	2	19	113	59	75	73	256	206	464	·91	·81	·86	·60	1
142	99	57	166	214	358	524	1,093	954	2,047	·78	·72	·75	·91	2
173	101	76	279	273	433	597	1,351	1,160	2,511	·80	·74	·77	·86	
4	5	...	...	...	...	...	39	36	75	·08	·09	·08	·61	3
27	24	21	6	10	24	20	191	107	298	·37	·21	·31	1·20	4
40	19	34	6	1	5	...	183	156	339	·58	·58	·58	·58	5
4	8	8	...	3	1	...	43	21	64	·14	·08	·11	·05	6
52	118	123	...	2	6	...	184	191	375	·37	·44	·40	·14	7
39	74	8	5	7	1	...	80	74	154	·20	·23	·21	·06	8
166	248	194	17	23	37	20	720	585	1,305	·29	·27	·28	·48	
339	349	270	296	296	470	617	2,071	1 745	3,816	·49	·47	·48	·63	

Small-pox in the districts of Assam during each month of the year 1936.

August.	September.	October.	November.	December.	Total.			Number of deaths among children.		Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	Number.
					Male.	Female.	Total.	Under 1 year.	One to 10 years.	Male.	Female.	Total.		
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	1	2	3	3	7	7	14	2	4	·03	·03	·03	...	1
33	46	28	38	59	218	234	452	83	107	·15	·18	·17	·02	2
34	47	30	41	62	225	241	466	85	111	·13	·15	·14	·02	
...	...	...	...	...	2	1	3	3	...	·004	·002	·003	·14	3
12	7	3	8	17	185	203	388	...	...	·36	·44	·40	·15	4
2	...	1	1	1	24	19	43	5	...	·08	·07	·07	·05	5
2	3	6	7	2	23	14	37	2	...	·08	·05	·07	·01	6
2	...	...	...	...	12	11	23	12	...	·02	·03	·02	·06	7
...	...	1	...	...	1	2	3	...	...	·003	·006	·004	·04	8
18	10	11	16	20	247	250	497	22	...	·10	·12	·11	·08	
52	57	41	57	82	472	491	963	107	111	·11	·13	·12	·05	

IMPERIAL STATEMENT No. IX.—Deaths registered from Fevers

Number.	Districts.			Circles of Registration.		Villages.		January.	February.	March.	April.	May.
				Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.					
1	2			3	4	5	6	7	8	9	10	11
	SURMA VALLEY.											
1	Cachar	...	...	13	12	1,607	719	599	463	411	459	464
2	Sylhet	...	...	41	40	11,717	11,717	3,424	2,840	2,108	2,286	2,751
	Total	...	...	54	52	13,324	12,436	4,023	3,308	2,519	2,745	3,215
	ASSAM VALLEY.											
3	Goalpara	...	...	18	17	3,138	4,785	1,720	1,373	1,463	1,736	1,639
4	Kamrup	...	...	16	16	2,738	650	729	485	618	657	904
5	Darrang	...	...	14	13	1,978	1,464	704	440	451	617	949
6	Nowgong	...	...	12	11	2,323	16	413	339	409	479	500
7	Sibsagar	...	...	17	16	2,284	2,284	644	522	428	727	883
8	Lakhimpur	...	...	17	17	2,498	1,670	445	295	402	478	576
	Total	...	...	94	90	15,009	10,869	4,655	3,554	3,771	4,694	5,454
	Total for the Province	...	...	148	142	28,333	23,305	8,678	6,862	6,290	7,439	8,669

IMPERIAL STATEMENT No. X.—Deaths registered from

Number.	Districts.			Circles of Registration.		Villages.		January.	February.	March.	April.	May.
				Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.	Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.					
1	2			3	4	5	6	7	8	9	10	11
	SURMA VALLEY.											
1	Cachar	...	...	13	12	1,607	212	98	67	64	80	96
2	Sylhet	...	...	41	39	11,717	1,691	313	225	161	195	311
	Total	...	...	54	51	13,324	1,903	411	292	225	275	407
	ASSAM VALLEY.											
3	Goalpara	...	...	18	15	3,188	82	19	6	7	8	14
4	Kamrup	...	...	16	15	2,738	78	24	20	18	33	64
5	Darrang	...	...	14	13	1,978	359	51	60	44	104	117
6	Nowgong	...	...	12	10	2,323	440	19	15	16	25	57
7	Sibsagar	...	...	17	16	2,284	781	140	81	120	191	325
8	Lakhimpur	...	...	17	16	2,498	177	88	85	46	106	193
	Total	...	...	94	85	15,009	1,917	341	267	251	467	770
	Total for the Province	...	...	148	136	28,333	3,820	752	559	476	742	1,177

in the districts of Assam during each month of the year 1936.

June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	Number.
							Male.	Female.	Total.	Male.	Female.	Total.		
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
550	512	429	441	413	424	632	2,943	2,859	5,802	10·34	11·25	10·77	11·71	1
2,790	2,872	2,602	2,704	2,907	2,870	3,610	18,169	15,595	33,764	12·91	11·84	12·39	12·78	2
3,340	3,384	3,031	3,145	3,320	3,294	4,242	21,112	18,454	39,566	12·47	11·75	12·13	12·61	
1,876	1,564	1,646	1,395	1,397	1,619	1,802	10,334	8,896	19,230	21·98	21·57	21·78	21·76	3
976	866	713	674	524	598	659	4,468	3,935	8,403	8·70	8·49	8·60	10·53	4
912	754	609	548	635	632	701	4,146	3,806	7,952	13·07	14·22	13·60	13·37	5
503	561	358	397	405	361	406	2,719	2,412	5,131	9·11	9·13	9·12	10·57	6
991	1,044	928	821	927	912	685	4,955	4,560	9,515	9·98	10·43	10·19	10·09	7
795	673	747	755	762	743	672	3,906	3,537	7,443	9·79	10·87	10·27	9·58	8
6,053	5,462	5,001	4,590	4,650	4,805	4,925	30,528	27,146	57,674	12·24	12·51	12·36	12·78	
9,393	8,846	8,032	7,735	7,970	8,159	9,167	51,640	45,600	97,240	12·33	12·19	12·27	12·71	

Dysentery and Diarrhœa in the districts of Assam during each month of the year 1936.

June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	Number.
							Male.	Female.	Total.	Male.	Female.	Total.		
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
94	90	103	87	88	74	89	540	490	1,030	1·89	1·93	1·91	1·88	1
198	148	191	268	291	393	343	1,682	1,355	3,037	1·19	1·03	1·11	·98	2
292	233	294	355	379	467	432	2,222	1,845	4,067	1·31	1·17	1·25	1·12	
36	11	10	34	40	21	23	148	81	229	·31	·20	·26	·21	3
26	29	34	36	25	21	19	193	156	349	·38	·34	·36	·51	4
219	155	143	70	105	91	63	654	568	1,222	2·06	2·12	2·09	1·62	5
45	43	52	38	62	37	31	265	175	440	·89	·66	·78	·55	6
420	384	224	194	280	213	198	1,453	1,317	2,770	2·93	3·01	2·97	2·17	7
301	254	206	224	225	179	129	1,075	961	2,036	2·69	2·95	2·81	2·18	8
1,047	876	669	596	737	562	463	3,788	3,258	7,046	1·52	1·50	1·51	1·19	
1,339	1,114	963	951	1,116	1,029	895	6,010	5,103	11,113	1·44	1·36	1·40	1·16	

IMPERIAL STATEMENT No. XI.—Deaths registered from

Number	Districts.			Circles of Registration.		Villages.		January.	February.	March.	April.	May.
				Number in each district.	Number from which deaths from respiratory diseases were reported.	Number in each district.	Number from which deaths from respiratory diseases were reported.					
1	2			3	4	5	6	7	8	9	10	11
	SURMA VALLEY.											
1	Cachar	...	...	13	11	1,607	96	115	87	85	68	83
2	Sylhet	...	...	41	37	11,717	447	163	149	152	149	109
	Total	...	...	54	48	13,324	543	278	236	237	217	192
	ASSAM VALLEY.											
3	Goalpara	...	...	18	14	3,188	48	15	14	15	10	4
4	Kamrup	...	...	16	15	2,738	41	25	16	22	25	20
5	Darrang	...	...	14	13	1,978	146	38	61	13	56	27
6	Nowgong	...	...	12	9	2,323	174	15	10	16	17	25
7	Sibsagar	...	...	17	16	2,284	117	71	97	99	83	105
8	Lakhimpur	...	...	17	16	2,498	103	115	158	139	147	139
	Total	...	...	94	83	15,009	629	279	356	304	338	320
	Total for the Province ...			148	131	28,333	1,172	557	592	541	555	512

IMPERIAL STATEMENT No. XII.—Deaths registered from plague

Number.	Districts.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.
		Number in each district.	Number from which deaths from plague were reported.	Number in each district.	Number from which deaths from plague were reported.					
1	2	3	4	5	6	7	8	9	10	11
	SURMA VALLEY.									
1	Cachar	13	...	1,607	...	...	...	...	...	...
2	Sylhet	41	...	11,717	...	...	...	...	...	...
	Total	54	...	13,324	...	...	...	...	...	...
	ASSAM VALLEY.									
3	Goalpara	18	...	3,188	...	...	...	...	...	...
4	Kamrup	16	...	2,738	...	...	...	...	...	...
5	Darrang	14	...	1,978	...	...	...	...	...	...
6	Nowgong... ..	12	...	2,323	...	...	...	...	...	...
7	Sibsagar	17	...	2,284	...	...	...	...	...	...
8	Lakhimpur	17	...	2,498	...	...	...	...	...	...
	Total	94	...	15,009	...	...	...	...	...	...
	Total for the Province ...	148	...	28,333	...	...	...	...	...	...

Respiratory diseases in the districts of Assam during each month of the year 1936.

June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	Number.
							Male.	Female.	Total.	Male.	Female.	Total.		
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
56	53	60	55	56	54	76	497	351	848	1·75	1·38	1·57	1·65	1
123	73	96	95	107	107	101	913	511	1,424	·65	·39	·52	·49	2
179	126	156	150	163	161	177	1,410	862	2,272	·83	·55	·70	·68	
11	9	9	18	8	14	11	85	53	138	·18	·13	·16	·14	3
16	16	21	11	10	23	15	157	63	220	·31	·14	·23	·29	4
61	65	35	47	39	31	42	304	211	515	·96	·79	·88	1·01	5
19	13	10	18	13	5	13	105	69	174	·35	·26	·31	·37	6
80	136	118	116	124	127	123	708	565	1,273	1·43	1·29	1·36	1·28	7
135	169	215	164	153	148	151	1,045	788	1,833	2·62	2·42	2·53	1·95	8
322	408	408	368	347	348	355	2,404	1,749	4,153	·96	·81	·89	·82	
501	534	564	518	510	509	532	3,814	2,611	6,425	·91	·70	·81	·76	

in the districts of Assam during each month of the year 1936.

[illegible]

APPENDIX II.

PROVINCIAL.

Statement showing details of registration in compulsory areas.

Compulsory registration area.		Population according to the Census of 1931.	Estimated birth at 228 per 1,000 married women between the ages of 15 and 40.	Number of births registered during the year.	Estimated birth-rate per mille.	Registered birth-rate per mille.	Number of deaths registered during the year.		Death-rate per mille.		Number of prosecutions under Act IV (B.C.) of 1873.	Number of convictions.
							Including deaths in hospitals.	Excluding deaths in hospitals.	Including deaths in hospitals.	Excluding deaths in hospitals.		
1		2	3	4	5	6	7	8	9	10	11	12
Silchar	...	13,069	Not available.	347	Not available.	26.55	202	143	15.46	10.94	3	...
Hailakandi	...	2,002		77		38.43	45	37	22.48	18.48	3	3
Haflong ..	...	1,124		32		28.47	45	37	40.04	32.92	8	3
Sylhet	...	21,435		657		30.65	374	325	17.45	15.16	19	17
Karimganj	...	5,691		187		32.86	111	81	19.50	14.23	...	...
Maulvibazar	...	4,314		117		27.12	61	49	14.14	11.36	12	...
Sreemangal	...	1,540		43		27.92	10	...	6.49	...	...	...
Habiganj	...	7,577		259		34.18	164	132	21.64	17.42	6	3
Sunamganj	...	5,326		216		40.55	103	90	19.34	16.90	8	4
Dhubri	...	9,435		283		29.99	161	119	17.06	12.61	4	4
Goalpara	...	6,415		203		31.64	82	67	12.78	10.44	10	10
Gauripur	...	5,592		161		28.79	89	...	15.91	...	...	...
Gauhati	...	21,797		695		31.88	388	264	17.80	12.11	39	31
Barpeta	...	13,777		860		62.42	321	302	23.29	21.92	35	26
Palasbari	...	3,454		142		41.11	62	...	17.95	...	17	17
Tezpur	...	10,268		286		27.85	244	184	23.76	17.92	20	16
Mangaldai	...	1,696		53		31.25	31	12	18.28	7.07		
Nowgong	...	10,413		361		34.67	199	141	19.11	13.54	26	20
Sibsagar	...	6,669		211		31.63	86	52	12.90	7.80	7	1
Nazira	...	3,484		103		29.56	78	...	22.39	...		
Jorhat	...	8,334		270		32.40	147	06	17.64	12.72	14	8
Golaghat	...	4,688		131		27.94	104	69	22.18	14.72	...	...
Dibrugarh	...	16,734		419		22.36	400	207	21.35	11.05	...	...
Doom Dooma	...	1,900		9		4.74	8	...	4.21	...	...	...
North Lakhimpur...	...	2,120		83		39.15	34	23	16.04	10.85	...	...
Tinsukia	...	6,160		144		27.91	74	...	14.34	...	...	...
Total	...	196,014		6,349		32.39	3,623	2,440	18.48	12.45	231	168

STATEMENTS.

VACCINATION.

A.—VACCINE

Vaccination Statement No. I.—Showing particulars of Vaccination in

No.	Districts or Towns.	Population according to census of 1931.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary	
				Male.	Female.	Total.		Total.	Suc- Under one year.
1	2	3	4	5	6	7	8	9	10
A	DISTRICTS (EXCLUDING TOWNS)								
	SURMA VALLEY AND HILL DIVISION.								
1	Cachar	554,336	30	24,015	18,677	42,692	1,423	19,012	1,460
2	Sylhet	2,678,459	106	106,294	90,162	196,456	1,853	111,773	6,507
3	Khasi and Jaintia Hills	265,602	8	11,335	11,763	23,098	2,887	12,485	1,319
4	Naga Hills	176,085	6	10,041	6,833	16,874	2,812	5,593	695
5	Lushai Hills	124,404	8	6,192	4,276	10,468	1,308	5,394	563
	Total of Surma Valley and Hill Division	3,798,886	158	157,877	131,711	289,588	1,833	154,257	10,544
	ASSAM VALLEY DIVISION.								
6	Goalpara	861,306	43	54,021	45,449	99,470	2,313	38,220	5,620
7	Kamrup	937,718	51	41,403	34,339	75,742	1,485	44,342	4,855
8	Darrang	572,853	41	39,094	32,813	71,907	1,754	29,311	4,870
9	Nowgong	552,168	26	34,819	27,325	62,144	2,390	24,369	5,694
10	Sibsagar	910,151	45	28,228	23,579	51,807	1,151	42,899	3,132
11	Lakhimpur	696,668	32	17,198	15,531	32,729	1,023	28,425	4,220
12	Garohills	188,553	7	9,547	9,018	18,565	2,652	8,744	3,626
	Total of Assam Valley Division	4,719,417	245	224,310	188,054	412,364	1,683	216,310	32,017
13	Manipur State	359,802	9	25,567	21,876	47,443	5,271	21,229	8,871
14	Sadiya Frontier Tract... ..	48,975	4	2,695	1,950	4,645	1,161	2,743	232
15	Balipara Frontier Tract	5,148	1	379	251	630	630	308	23
	Total of Districts (excluding towns)	8,932,228	417	410,828	343,842	754,670	1,810	394,847	51,687

DEPARTMENT.

the province of Assam during the year 1936-37.

vaccinations.			Re-vaccination.			Percentage of success- ful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Total cost of vaccination department.	Number of all successful vacci- nations and re- vaccinations performed by the vaccination staff only.	Average cost of each successful case performed by the vaccina- tion staff.
Successful.		Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.				
One and under six years.	Total of all ages.										
11	12	13	14	15	16	17	18	19	20	21	22
									Rs. a. p.		Rs. a. p.
13,643	17,961	315	23,680	10,170	4,302	96·06	52·48	50·75	6,603 15 0	28,131	0 3 9
74,605	99,290	4,784	84,683	39,632	15,852	92·80	57·58	51·87	18,420 9 0	138,922	0 2 1
8,444	12,458	2	10,613	6,139	496	99·80	60·68	70·18	3,926 8 3	18,597	0 3 5
3,558	4,796	205	11,281	7,960	178	89·01	71·69	72·44	2,120 5 0	12,756	0 2 8
3,674	1,162	714	5,074	1,664	480	24·83	36·22	22·72	2,088 0 0	2,826	0 11 10
103,924	135,667	6,020	135,331	65,565	21,308	91·52	57·50	52·97	33,159 5 3	201,232	0 2 8
19,047	33,219	4,364	61,250	31,483	14,709	98·12	67·65	75·12	9,983 7 0	64,702	0 2 6
27,694	39,009	3,221	31,400	14,357	9,987	94·86	62·38	56·91	6,918 1 6	53,866	0 2 1
13,971	23,800	1,067	42,596	25,538	16,878	84·27	99·30	86·13	5,673 2 3	49,338	0 1 10
13,231	23,083	...	37,775	28,835	54	94·72	76·44	94·03	5,820 5 0	51,918	0 1 10
29,930	38,024	2,220	8,908	3,553	1,523	93·47	48·11	45·63	5,521 2 0	41,577	0 2 1
19,130	25,936	473	4,304	2,233	534	92·79	59·23	40·43	4,502 4 3	28,169	0 2 7
3,315	6,961	649	9,821	4,116	1,275	85·99	48·16	58·75	1,952 6 0	11,077	0 2 10
126,318	190,032	11,994	190,054	110,115	44,960	93·01	72·88	63·60	40,370 12 0	300,147	0 2 2
6,139	2,265	2,092	26,214	17,165	4,626	11·84	79·60	54·06	5,719 8 0	19,450	0 4 8
1,907	2,139	108	1,902	667	373	81·18	43·62	57·29	2,527 7 0	2,806	0 14 5
126	248	8	322	203	25	80·21	70·03	88·58	291 8 6	456	0 10 3
238,414	330,351	20,222	359,823	193,740	71,292	88·18	67·15	58·67	82,068 8 9	524,091	0 2 6

VACCINATION STATEMENT No. I.—*Showing particulars of vaccination in*

No.	Districts or towns.	Population of district according to census of 1931.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary		
				Male.	Female.	Total.		Total.	Secondary	
									Under one year.	One year and under six years.
1	2	3	4	5	6	7	8	9	10	11
B.—TOWNS										
SURMA VALLEY AND HILL DIVISION.										
1	Silchar	13,069	1	590	327	917	917	377	196	167
2	Hailakandi	2,002	...	134	64	198	...	113	2	108
3	Hailong	1,124	...	51	41	92	...	32	8	16
4	Sylhet	21,425	2	2,380	457	2,837	1,418	594	320	223
5	Karimganj	5,691	1	1,510	593	2,103	2,103	362	118	178
6	Maulvi Bazar	4,314	1	380	50	430	430	90	82	8
7	Sreemangal	1,540	1	47	23	70	70	68	1	54
8	Habiganj	7,577	1	1,126	112	1,238	1,238	166	31	107
9	Sunamganj	5,326	3	1,694	905	2,599	866	608	47	313
10	Shillong	21,300	1	343	303	646	646	198	141	54
11	Jowai	3,024	...	9	9	18	...	9	1	8
12	Kohima	2,759	...	39	36	75	...	31	...	7
Total of Surma Valley and Hill Division		89,161	11	8,303	2,920	11,223	1,020	2,648	947	1,243
ASSAM VALLEY DIVISION.										
13	Dhubri	9,435	1	133	114	247	247	163	65	96
14	Goalpara	6,415	1	232	82	364	364	78	23	52
15	Gauripur	5,592	1	246	216	462	462	226	158	25
16	Gauhati	21,797	2	1,431	555	1,986	993	586	145	393
17	Barpeta	12,777	1	369	319	688	688	520	137	372
18	Palasbari	3,454	1	12	18	30	30	30	1	12
19	Tezpur	10,268	1	317	147	464	464	274	70	177
20	Mangaldai	1,696	1	15	16	31	31	31	16	10
21	Nowgong	10,413	1	1,172	238	1,410	1,410	262	172	74
22	Jorhat	8,334	1	315	187	502	502	289	129	144
23	Sibsagar	6,669	1	142	120	262	262	194	13	162
24	Golaghat	4,688	1	262	98	360	360	171	61	87
25	Nazira	3,484	1	173	41	214	214	95	18	51
26	Dibrugarh	18,734	1	811	383	1,194	1,194	382	92	230
27	Tinsukia	5,160	1	90	67	157	157	152	27	109
28	Doom Dooma	1,900	1	29	14	43	43	31	6	24
29	North Lakhimpur	2,120	1	56	50	106	106	98	46	52
30	Tura	2,358	...	109	52	161	...	78	32	28
Total of Assam Valley Division		136,294	18	5,664	2,717	8,681	482	3,660	1,211	2,098
31	Imphal	85,804	4	8,196	6,723	14,919	3,730	3,216	1,666	667
32	Sadiya	4,370	1	24	16	40	40	35	6	29
Total of Towns		315,629	34	22,187	12,376	34,863	1,025	9,559	3,830	4,037
Total Vaccine Department ...		9,247,857	451	433,315	356,218	789,533	1,751	404,406	55,517	242,451
Total of Dispensary staff ...		...	...	...	...	9728	...	2,388	506	1,135
Total tea gardens and garden agencies ...		...	...	35,143	31,786	66,929	...	30,628	15,629	11,065
Total Jails, Mental hospitals, Police hospitals and infectious diseases hospitals.		...	...	4,324	178	4,502	...	152	5	28
Total of Railway Dispensaries ...		...	...	1,304	630	1,934	...	343	45	199
Total of private Medical Practitioners ...		...	...	...	...	...	...	...	...	...
Shillong Vaccine Depot ...		...	...	...	...	...	...	...	...	...
Grand total		9,247,857	451	474,086	388,812	872,626	1,935	437,917	71,702	254,878

DEPARTMENT.

the Province of Assam during the year 1936-37.

Vaccinations.		Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Total cost of Vaccination Department.	Number of all successful vaccinations and re-vaccinations performed by the vaccination staff only.	Average cost of each successful case performed by the vaccination staff.
Successful.										
Total of all ages.	Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.				
12	13	14	15	16	17	18	19	20	21	22
								Rs. a. p.		Rs. a. p.
369	5	340	56	21	99.19	10.79	32.52	448 0 0	425	1 0 10
12	1	85	16	23	100.00	25.81	63.94	24 0 0	128	1 3 0
29	..	60	12	18	90.63	28.57	36.48	...	41	0 0 0
555	5	2,243	458	215	94.23	22.58	47.26	533 1 0	1,013	0 8 5
357	4	1,741	716	118	99.72	44.12	188.54	139 2 6	1,073	0 2 1
90	...	340	124	...	100.00	36.47	49.61	60 0 0	214	0 4 6
68	...	2	2	...	100.00	100.00	45.45	20 0 0	70	0 4 7
158	3	1,072	305	167	96.93	23.70	61.11	218 0 0	463	0 7 6
531	17	1,991	1,098	225	89.85	62.17	305.86	129 9 0	1,629	0 1 3
198	...	448	...	448	100.00	...	9.30	497 7 0	198	2 8 2
9	...	9	8	...	100.00	88.89	5.62	3 0 9	17	0 2 10
7	12	44	...	31	36.84	...	2.54	...	7	...
2,483	47	8,575	2,795	1,266	95.46	38.24	59.20	2,072 4 3	5,278	0 6 3
162	...	84	5	...	99.39	5.95	17.70	311 5 6	167	0 13 10
75	3	286	37	222	100.00	57.81	17.46	26 7 0	112	0 3 9
183	3	236	93	13	82.06	41.70	49.36	235 0 0	276	0 13 7
541	18	1,400	748	269	95.25	65.96	59.04	844 11 6	1,287	0 10 6
510	...	168	74	58	98.08	67.27	42.39	328 6 0	584	0 9 0
13	...	...	...	...	43.33	...	3.76	55 5 0	13	4 4 1
250	2	190	52	41	91.91	34.90	29.41	371 15 6	302	1 3 8
26	4	...	...	...	96.30	...	15.33	82 0 0	26	3 2 6
257	...	1,148	627	20	98.09	55.59	84.89	358 2 6	884	0 6 6
274	3	213	22	12	95.80	10.95	35.52	263 2 0	296	0 14 3
175	1	68	43	2	90.67	65.15	32.69	245 5 0	218	1 2 0
53	4	189	46	27	91.62	28.40	42.45	250 5 0	199	1 4 5
69	...	119	38	...	72.63	31.93	30.71	310 0 0	107	2 14 0
322	...	812	177	398	84.29	42.75	26.64	330 0 0	499	0 10 7
146	9	5	1	1	95.42	25.00	28.49	240 0 0	147	1 10 1
31	...	12	10	...	100.00	83.33	21.58	31 10 0	41	0 12 4
98	...	8	6	...	100.00	75.00	49.06	24 0 0	104	0 3 8
60	14	83	32	3	93.75	40.00	39.02	...	92	...
3,345	61	5,021	2,009	1,066	92.94	50.80	39.28	4,308 11 0	5,354	0 12 11
300	352	11,703	7,068	2,468	10.47	76.53	85.87	1,932 4 0	7,368	0 4 2
35	...	5	2	3	100.00	100.00	8.47	4 2 0	37	0 1 9
6,163	460	25,304	11,874	4,803	67.73	57.92	57.15	8,317 5 3	18,037	0 7 5
336,514	20,682	385,127	205,614	76,095	87.70	66.53	58.62	90,385 14 0	542,128	0 2 8
1,839	275	7,340	3,961	1,545	87.03	68.35	...	...	...	...
28,022	460	36,301	27,376	515	92.89	76.50	...	...	...	...
120	17	4,350	2,219	476	88.89	57.28	...	...	...	...
326	10	1,591	1,038	125	97.90	70.80	...	...	...	...
...
...	...	...	...	...	...	...	...	18,978 12 0	...	...
366,821	21,444	434,709	240,208	78,756	88.08	67.48	65.64	1,09,364 10 0	542,128	0 3 3

Sum

			Total number of persons vaccinated.		Total number of operations performed.		Percentage cases in which were
			Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.
1			2	3	4	5	6
By SPECIAL STAFF—							
Districts excluding towns	...	...	394,847	359,823	394,847	359,823	88·18
Towns	...	...	9,559	25,304	9,559	25,304	67·73
Total	...		404,406	385,127	404,406	385,127	87·70
By dispensary staff	...	...	2,388	7,340	2,388	7,340	87·03
By private Medical Practitioners	...	...	...	...	...	...	...
By Railway dispensaries	...	...	343	1,591	343	1,591	97·90
By other agencies, Tea-gardens, Jail hospitals, Police hospitals, Mental hospitals and infectious diseases hospitals.	...	...	30,780	40,651	30,780	40,651	92·87
Total	...		33,511	49,582	33,511	49,582	92·54
Shillong Vaccine Depot	...	...	...	...	..	...	...
Grand total	...	...	437,917	434,709	437,917	434,709	88·08

mary.

of successful the results known.	Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of suc- cessful vac- cination per 1,000 of po- pulation.	Total cost of Department.	Number of all successful vaccinations performed.	Average cost of each successful case.
Re-vaccina- tion.	Vaccinators employed.	Persons vacci- nated by each vaccinator.	Under one year.	One and under six years.				
7	8	9	10	11	12	13	14	15
67·15	417	1,810	51,687	238,414	58·67	Rs. a. p. 82,068 8 9	524,091	Rs. a. p. 0 2 6
57·92	34	1,025	3,830	4,037	57·15	8,317 5 3	18,037	0 7 5
66·53	451	1,751	55,517	242,451	58·62	90,385 14 0	542,128	0 2 8
68·35	...	...	506	1,135	...	...	...	...
...
70·80	...	...	45	199	...	...	...	...
74·62	...	...	15,634	11,093	...	...	...	...
73·73	...	...	...	...	...	...	...	...
...	...	...	...	...	...	18,978 12 0	...	...
67·48	451	1,935	71,702	254,378	65·64	1,09,364 10 0	542,128	0 3 3

B.—DISPENSARY

Statement No. II.—Showing Dispensary Vaccination

Districts.	Number of dispensaries in each district to which a vaccinator is attached.	Average number of vaccinators attached to dispensaries during the year.	Total number of persons vaccinated.	Average number of persons vaccinated by each vaccinator.	Primary vaccination.				
					Total.	Successful.			Un-known.
						Under one year.	One year and under six years.	Total of all ages.	
1	2	3	4	5	6	7	8	9	10
Cachar
Sylhet	558	...	188	17	117	165	3
Khasi and Jaintia Hills	223	...	103	13	84	90	13
Naga Hills	660	...	127	59	36	97	30
Lushai „	511	...	217	1	135	136	...
Goalpara	499	...	46	3	28	46	...
Kamrup
Darrang	900	...	19	2	...	6	13
Nowgong	269	...	92	16	59	87	...
Sibsagar	118	...	7	2	3	5	...
Lakhimpur	211	...	39	10	28	38	...
Garó Hills	596	...	243	76	126	202	22
Manipur State	4,956	...	1,186	293	488	872	194
Sadiya Frontier Tract	229	...	126	14	81	95	...
Balipara Frontier Tract
Total	9,728	...	2,388	506	1,135	1,839	275

Imperial Statement No. III.—Showing the number of persons primarily vaccinated in each of the under

Vaccinating Agents.	Person							
	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.
	Year ending							
	1927-28.		1928-29.		1929-30.		1930-31.	
1	2	3	4	5	6	7	8	9
Government ...	65,524	59,339	50,560	44,570	36,803	32,086	38,520	33,353
Dispensaries ...	5,980	5,171	5,662	4,503	2,851	2,231	2,539	2,217
Municipal ...	5,881	5,443	7,231	6,744	4,935	4,645	4,752	4,521
Local Funds ...	312,404	291,569	288,661	270,257	260,658	238,776	250,393	230,321
Licensed vaccinators	...	...	...	...	...	...	...	...
Apprentices ...	1,092	1,059	713	657	1,132	962	1,145	1,078
Native States ...	18,304	15,995	19,366	14,258	18,240	16,171	17,403	15,203
The Gardens and garden agencies	...	...	...	...	...	...	...	...
Jails Mental Hospitals, Police Hospitals, and infectious diseases hospitals.	...	...	...	...	...	...	...	...
Railway dispensaries	...	...	...	...	...	...	...	...
Total ...	409,185	378,576	372,193	340,989	324,619	294,871	314,752	286,693

VACCINATION.

in the Province of Assam during the year 1936-37.

Re-vaccination.			Percentage of successful cases in which the results were known.		Percentage of unknown cases to total cases.	
Total.	Successful.	Unknown.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
11	12	13	14	15	16	17
...
375	121	62	91.67	38.66	1.64	16.53
120	...	118	100.00	...	12.62	98.33
533	280	212	100.00	87.23	23.62	39.77
294	121	...	62.67	48.59	...	...
453	321	12	100.00	72.79	...	2.65
...
881	301	190	100.00	38.05	68.42	21.57
177	78	2	94.56	44.57	...	1.13
109	82	...	71.43	75.23	...	...
172	150	4	97.44	89.05	...	2.33
353	113	138	91.40	52.56	83.13	39.09
3,770	2,352	804	87.90	79.30	16.36	21.33
103	42	3	75.40	42.00	...	2.91
...
7,340	3,961	1,545	87.03	68.35	11.52	21.05

and the number of those who were successfully vaccinated in the Province of Assam mentioned official years.

primarily vaccinated.

Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.
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31st March—

1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
10	11	12	13	14	15	16	17	18	19	20	21
41,320	37,769	35,322	31,076	37,101	30,405	59,210	32,596	37,114	28,573	49,047	37,407
2,753	2,108	2,139	1,629	2,161	1,759	3,414	2,862	5,091	3,359	2,388	1,839
5,900	5,542	5,846	5,582	5,603	5,336	6,376	6,106	9,926	9,481	5,897	5,485
250,148	221,525	284,814	257,327	311,975	272,296	296,742	272,775	325,199	293,466	323,815	272,546
...
600	555	446	406	643	507	1,218	1,142	260	251	1,202	1,168
17,551	15,484	15,530	14,782	16,104	14,219	16,129	15,185	15,599	1,285	24,445	19,908
...	...	...	...	...	...	...	...	...	...	30,628	28,922
...	...	...	...	...	...	...	...	...	...	152	120
...	...	...	...	...	...	...	...	...	...	343	326
318,272	282,983	344,097	310,802	373,587	324,522	383,089	330,666	393,189	336,415	47,417	366,821

Statement No. IV.—Showing the number of vaccinations performed in Municipal towns on children under one year of age during the year 1936-37.

Districts.	Towns.	Number of births during the year.	Number of deaths amongst children under one year during the year.	Number of successful vaccination on children under one year during the year ending 31st March 1937.	Date of extension of Vaccination Act to town
1	2	3	4	5	6
Cachar	Silchar ...	325	37	188	21st January 1892.
	Hailakandi ...	81	9	2	10th November 1922.
	Sylhet ...	650	97	310	1st October 1882.
	Habiganj ...	247	49	28	11th December 1913.
Sylhet	Sunamganj ...	224	32	34	28th June 1915.
	Karimganj ...	188	28	118	27th July 1915.
	Maulvi Bazar ...	123	14	90	16th April 1916.
	Seemangal ...	51	2	1	9th October 1936.
Khasi & Jaintia Hills	Shillong ...	713	57	141	21st June 1895.
	Total of Surma Valley and Hill Division.	2,602	325	912	
	Dhubri ...	305	42	55	13th February 1891.
Goalpara	Goalpara ...	209	12	78	12th November 1890.
	Gauripur ...	158	22	66	15th September 1922.
	Gauhati ...	722	86	475	August 1882.
Kamrup	Barpeta ...	892	70	498	29th October 1915.
	Palasbari ...	133	15	30	16th November 1927.
	Tezpur ...	304	44	62	22nd May 1907.
Darrang	Mangaldai ...	68	9	20	12th October 1906.
Nowgong	Nowgong ...	387	41	205	7th April 1897.
	Sibsagar ...	184	18	17	21st January 1892.
	Jorhat ...	282	35	129	12th April 1892.
Sibsagar	Golaghat ...	135	14	12	24th March 1892.
	Nazira ...	102	20	14	1st December 1916.
	Dibrugarh ...	431	42	92	September 1883.
Lakhimpur	Doom Dooma ...	11	1	6	21st October 1918.
	Tinsukia ...	139	14	27	31st August 1922.
	Total of Assam Valley Division.	4,462	485	1,786	
	Total for the Province.	7,064	810	2,698	

Statement No. V—Showing, side by side, the ratio (per 1,000 of population) of deaths

Districts.	1927-28.		1928-29.		1929-30.		1930-31.	
	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.
1	2	3	4	5	6	7	8	9
Caohar	·15	41,331	1·61	65,942	·32	30,687	·04	19,418
Sylhet	1·37	253,654	1·79	219,845	·15	145,407	·04	129,243
Khasi and Jaintia Hills ...	·28	63,020	·06	29,559	·03	13,574	...	12,967
Naga Hills	·006	8,845	...	5,374	...	5,845	...	5,325
Lushai Hills ... ..	...	9,588	...	10,632	...	11,771	...	5,037
Goalpara	1·68	65,943	1·20	49,433	·26	55,246	·61	51,704
Kamrup	·67	49,939	·37	49,392	·21	49,553	·29	49,825
Darrang	·10	25,860	·10	26,664	·08	26,726	·15	35,005
Nowgong	·005	26,443	·06	26,871	·01	27,908	...	28,873
Sibsagar	·57	50,473	·06	37,525	·02	39,509	·03	41,950
Lakhimpur	·53	26,400	·15	20,639	·26	21,346	·27	25,601
Garohills	·41	41,017	·35	22,531	·06	21,541	·13	18,997
Manipur State ... ..	...	34,317	...	41,077	...	30,444	...	19,284
Sadiya Frontier Tract ...	...	3,757	...	4,793	...	4,385	·02	6,777
Balipara Frontier Tract ...	...	...	...	...	...	...	...	...
Total	·79	700,587	·86	610,277	·14	483,942	·14	450,006

from small-pox and the number of successful vaccinations during the ten years ending 1936-37.

1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.
10	11	12	13	14	15	16	17	18	19	20	21
...	19,255	...	24,418	...	22,822	...	27,002	...	28,069	·06	28,725
·01	108,508	·004	116,176	·02	111,605	·02	120,612	·04	122,728	·25	143,670
·003	14,098	...	15,222	...	13,654	...	18,494	...	21,296	...	18,902
...	6,044	...	6,758	...	6,432	...	8,546	...	7,951	...	13,140
...	4,914	...	7,499	...	7,986	...	4,317	...	3,113	...	3,083
·29	65,171	·30	110,298	·04	94,802	·01	74,769	·002	56,281	·003	65,624
·17	46,086	·17	41,043	·07	46,478	·10	46,534	·26	82,942	·27	55,250
·04	24,716	·05	28,454	·04	30,935	·06	38,890	·05	42,799	·06	49,973
...	28,507	...	28,051	·002	28,922	·03	37,916	·04	51,159	·06	52,967
·07	34,567	·06	30,493	·04	35,214	·01	36,946	·13	44,429	·02	42,484
·11	18,877	·03	24,440	·008	28,118	·01	34,550	·001	32,652	·002	29,148
·15	14,948	·03	13,978	·06	21,342	...	18,855	·01	13,852	...	11,484
...	18,726	...	20,313	...	20,293	...	7,890	...	29,127	...	30,042
...	4,123	·09	2,878	...	2,552	...	5,131	...	8,529	...	2,980
...	291	...	478	...	514	...	400	...	669	...	456
·07	408,831	06	470,499	·03	471,669	·02	480,852	·07	545,596	·12	547,928

GOVERNMENT OF ASSAM

ORDERS BY THE GOVERNOR

Resolution on the Annual Public Health Report of the Province of Assam for the year 1936.

Extract from the proceedings of the Government of Assam in the Local Self-Government Department, Public Health Branch, No.3900-L.S.-G., dated the 23rd November 1937.

READ—

The Public Health Report for the year 1936.

RESOLUTION

The year on the whole was a healthy one in Assam and there were no serious epidemics. The death rate *per mille* based on the intercensal population decreased from 20.51 to 18.63 and the birth rate from 28.99 to 28.69. Unfortunately these figures are quite unreliable and the extremely low death rates of 11.18 and 11.9 *per mille* returned from Kamrup and Nowgong districts respectively merely denote how extremely inaccurate the system of registration must be. Even in towns where registration of vital occurrences is legally compulsory large numbers of births and deaths go unreported and the omissions in the rural areas are obviously so large as to vitiate the whole of the statistics. No substantial improvement in the present system can however be expected until a reliable and paid registration agency is introduced and this would entail much expense.

2. The number of reported deaths from cholera during the year was 3,816 as against 7,436 in 1935—a considerable improvement. The province was fortunately free from any serious epidemic of cholera during the year and the mortality from this disease was—with the exception of the year 1934—less than in any year during the last 10 years.

3. The number of deaths from small-pox rose from 529 to 963; Kamrup and Sylhet are the districts which suffered most. It is, however, satisfactory to observe that the total number of vaccination operations performed amounted to 872,626 against 852,685 in the previous year and 704,936 in 1934. Typhoid was responsible for 77 deaths in 15 towns against 56 in 11 towns in the previous year. The increase in the number of typhoid cases in the towns of Assam is a matter which has aroused considerable public interest. The urban population of the province is undoubtedly increasing rapidly—particularly in Shillong—and it behoves all Municipal Boards to exert themselves—particularly in matters relating to sanitation and water-supply.

4. The number of *kala-azar* cases treated amounted to 10,587 against 11,100 in the previous year and reported deaths from *kala-azar* fell from 845 to 753. The method of diagnosis and treatment by means of intravenous injection of *urea-stibamine* remained the same. A considerable amount of survey work was done during the year and in Cachar district alone out of 391 villages surveyed 401 cases were suspected to be suffering from *kala-azar* of which 135 were found positive. The Department is continually on the watch for any sign of a recrudescence of this disease in any district.

5. The total number of reported deaths from “fevers” which include malaria and other diseases which have fever as their predominant symptom fell from 106,719 to 97,240 and the number of cases of malaria treated in dispensaries under the Medical and Public Health Departments from 733,408 to 633,534. In order to bring the Government treatment of quinine reinforced cinchona febrifuge within reach of the pockets of most people it has been made up into treatments containing ten tablets of 4 grains which is sold at 2 annas a treatment. There was however a decrease in the number of treatment parcels sold—namely from 10,579 in 1935 to 9,278 in the current year. The decrease is explained by the fact that 1,500lbs of quinine were distributed free during the year to indigent malaria patients.

The Assam Medical Research Society completed another useful year's work of research and survey. The annual 8 weeks training course in Malariology held by this Society was attended by 15 doctors of whom 13 passed the final examination.

6. The usual activities against leprosy, yaws and minor eye complaints continued. Adulteration of food-stuff is reported to be increasing. The statement on the working of the Assam Pure Food Act incorporated in the report is not encouraging. Local Boards appear to take no interest whatever in the matter and only one Local Board submitted a sample of food for analysis. The record of municipalities is better but on the whole it cannot be denied that the administration of the Act is far from satisfactory.

7. The matters dealt with in this Resolution relate to a period before the present Government had taken office. Since their assumption of office the present Government have had to face a serious cholera epidemic in Sylhet and have been brought in close contact with certain aspects of public health administration in all districts. As a result of this experience Government are definitely of opinion that in many places the officials of the Public Health Department are not in such close contact with the conditions in the villages as they should be. Government must insist and will insist that one of the prime duties of their officers in the Public Health Department is to be intimately acquainted with the public health conditions of the areas in their jurisdiction. Government are inclined to think that too often the Public Health Officer feels that it is not his duty to take the initiative without a "report" from a *Gaonbura* or *Chaukidar*.

Government are therefore at present considering how best to re-organize the Public Health Department so as to create a more intimate spirit of co-operation between the villagers and the officials of the Department. Meanwhile they call upon all officers of the Department to consider it their bounden duty to move constantly and diligently among the villages in the interior of the areas under their jurisdiction and to search for, track out and subdue those diseases to combat which the Department of Public Health was created.

8. In conclusion the Governor wishes to express his thanks to Dr. S. H. Paul for his report and his appreciation of the services which Lt.-Col. T. D. Murison, I. M. S., (who retired on the 7th of November) has rendered to the Province during his fourteen years' tenure of the post of Director of Public Health.

ORDER—Ordered that a copy of the Resolution be published in the *Assam Gazette* for general information,

Shillong,

The 23rd November 1937,

By order of the Governor of Assam,

C. S. MULLAN,

*Secretary to the Government of Assam in
the Education and Local Self-Govern-
ment Departments,*

